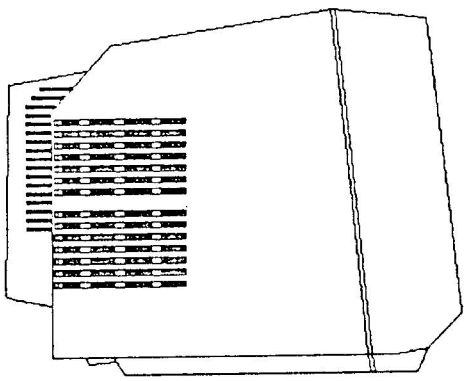
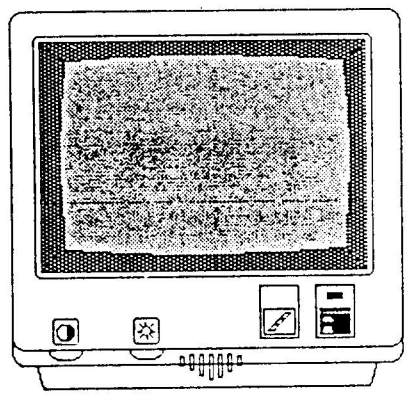
TAXAN

SERVICE MANUAL





For The Supervision 12" Colour Monitor Series:

Supervision II, Supervision III,
Supervision IV, Supervision IVm
Supervision 620, Supervision 625,
Supervision 630 & Supervision 640

TAXAN Document Control

Document Title : 12 Inch Supervision Series Service Manual

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13/9/89: Original manuals reprinted and combined into one
New cover style plus inclusion of document control,
safety notices and adjustment guide.

TAXAN

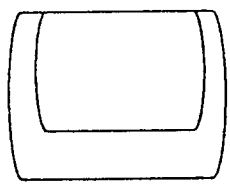
A General Guide to monitor display adjustment

The diagrams below show how to correct certain display problems using commonly available external monitor controls. Not all monitors have the full range of controls mentioned available externally, although they are all usually present in some form (often as factory pre-set controls on the internal circuit boards).

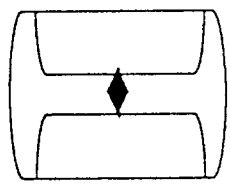
CAUTION - NEVER ADJUST A MONITORS CONTROLS WITH A METAL TOOL. ALWAYS USE A PLASTIC ADJUSTMENT TOOL.

Taxan monitors are usually provided with such a tool where external adjustments are likely to be required.

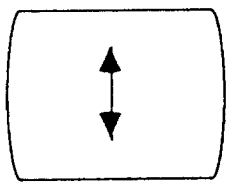
Vertical Position- adjust if image is not vertically centred on the screen



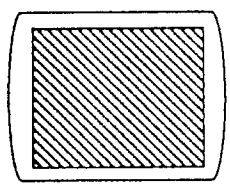
Vertical Hold - adjust if the image rolls vertically



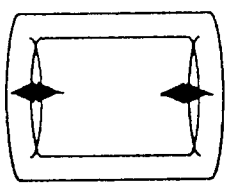
Vertical Size - adjust if the image does not fill the screen in the vertical direction.



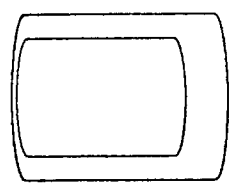
Horizontal Hold - adjust if the image is composed of moving diagonal lines.



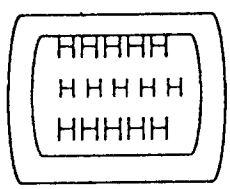
Side Pincushion - Adjust to straighten the sides of the image if they are curved inwards or outwards.



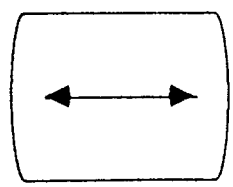
Horizontal Position - adjust to centre the image horizontally on the screen



Vertical Linearity - adjust if areas of the are wrongly proportioned.



Horizontal Size - adjust if the image does not fill the screen in the horizontal direction.



TAXAN Safety Notices

Please Note:

The following information is provided in the interests of safety.

1). This equipment is mains powered (230 Volts AC) and is therefore potentially hazardous once the cover is removed.

2). Only trained engineering staff should attempt any work on the unit with the cover removed.

3). While servicing the unit , protect the mains supply to the equipment under test and all electrically powered test equipment with a suitably rated Residual Current Circuit Breaker (rccb) unit. These devices are readily available and are designed to remove the mains supply quickly in the event of a serious leakage of current to earth.

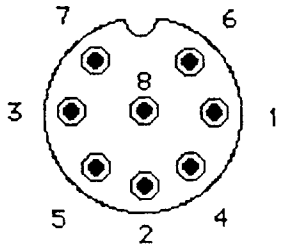
4). Ensure all test equipment, and the unit under test is adequately earthed .

5). Always discharge the CRT before attempting any work on the high voltage power circuits.

6). We advise the use of Electrostatic Damage Prevention equipment when servicing electronic equipment containing static sensitive devices.

TAXAN Connection & Configuration

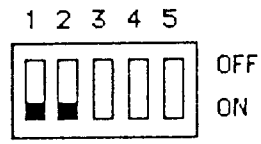
PIN CONNECTIONS (8 Pin DIN Connector)



Pin 1	TXTN signal (disables text switch)
Pin 2	Red video (TTL)
Pin 3	Green video (TTL)
Pin 4	Blue video (TTL)
Pin 5	Intensity (TTL)
Pin 6	Ground
Pin 7	Composite sync (or horizontal sync if seperate syncs are required)
Pin 8	Vertical sync

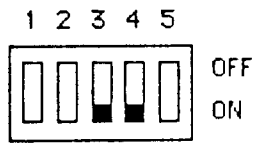
DIP Switch Settings for all models except Supervision 625 where only three switches are present since text mode colour is selected from the front panel.

1. Colour Mode



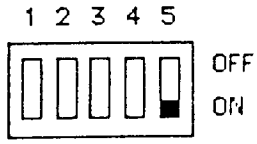
ON ON - IBM
OFF ON - Apple
ON OFF - Japanese Computers
OFF OFF - Standard Colours (BBC)

2. Text mode screen colours



ON ON - Green text on black background
OFF ON - Amber text on black background
ON OFF - Black text on white background
OFF OFF - White text on blue background *

3. Sync Polarity



ON - Positive Composite Sync
- Hsync ⊕ Vsync ⊖
- Hsync ⊖ Vsync ⊕

OFF - Negative Composite Sync
- Hsync ⊕ Vsync ⊕
- Hsync ⊖ Vsync ⊖

Supervision 625 has only three switches. Switches 1 & 2 select Colour mode as above. Switch 3 selects sync polarity as in Switch 5 above

IMPORTANT NOTICE FOR SERVICE PERSONNEL BEFORE SERVICING

PLEASE READ BEFORE ATTEMPTING SERVICE

1. While the monitor is in operation, do not attempt to connect or disconnect any wires.

2. Make sure the power cord is disconnected before replacing any components in the monitor.

3. When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the transistors in the monitor.

4. When servicing the H: V. area, be certain that the C. R. T anode is safely discharged to ground before removing the anode cap.

5. Caution must be exercised when servicing this monitor.
   The regulator has no current limiting and even a momentary short of an output voltage could cause destruction of the pass transistors.

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5. Caution must be exercised when servicing this monitor.
   The regulator has no current limiting and even a momentary short of an output voltage could cause destruction of the pass transistors.

2. Pin assignment

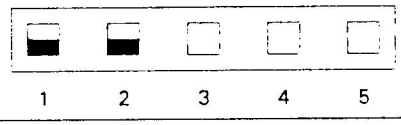
Pin no.	Signal
1	Reserved for special TEXT signal
2	Red video signal
3	Green video signal
4	Blue video signal
5	Intensity signal
6	Signal ground
7	Horizontal or composite sync signals
8	Vertical sync signal

HOW TO SET COLOR MODE

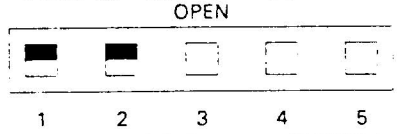
1. Setting the color mode

The color mode switch (a five-switch DIP unit) is on the rear panel. Set it as follows according to your computer.

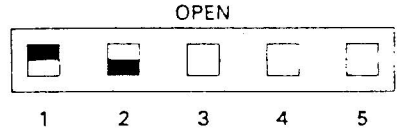
(1) Mode 1

Color mode switch	Color
	IBM

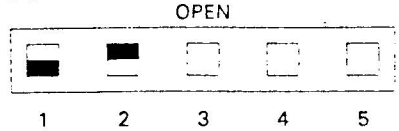
(2) Mode 2

Color mode switch	Color
	AT & T (OLIVETTI)*

(3) Mode 3

Color mode switch	Color
	APPLE

(4) Mode 4

Color mode switch	Color
	NTSC

2. Pin assignment

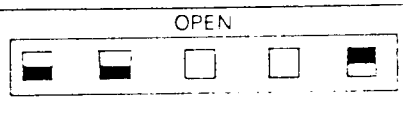
Pin no.	Signal
1	Special TEXT signal (reserved for TAXAN APPLE RGB cards)
2	Red video signal
3	Green video signal
4	Blue video signal
5	Intensity signal
6	Signal ground
7	Horizontal and composite sync signals
8	Vertical sync signal

HOW TO SET COLOR MODE

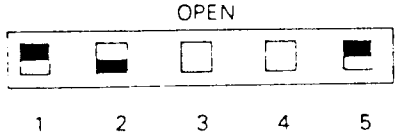
1. Setting the color mode

The color mode switch (a five-switch DIP unit) is on the rear panel. Set it as follows according to your computer.

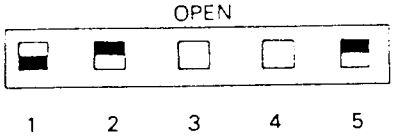
(1) IBM mode

Color mode switch	Computer
	IBM AT IBM XT IBM PC IBM PCjr

(2) APPLE color mode

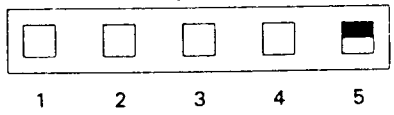
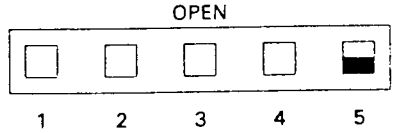
Color mode switch	Computer
	• APPLE II Plus (APPLE II+) • APPLE IIe, IIc APPLE III

(3) Standard color mode

Color mode switch	Computer
	Japanese computer

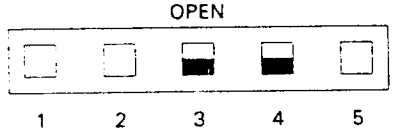
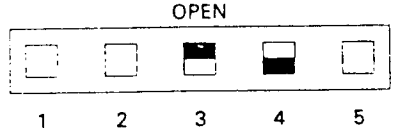
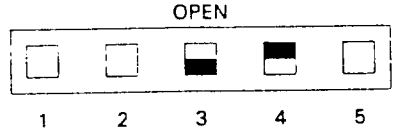
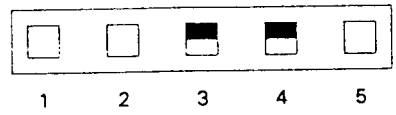
2. Setting the sync signal input mode (fifth color mode switch)

The sync signal of nearly any personal computer can be input by turning off the fifth DIP switch. But the sync signal of a few computers can be input only with this switch on. The following table shows the switch setting for a number of sync signals.

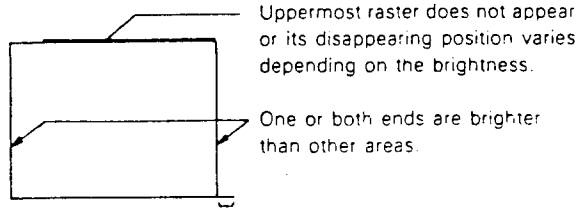
Color mode switch	Condition	Signal type
	A	H. sync: Positive TTL level V. sync: Negative TTL level
	B	H. sync: Negative TTL level V. sync: Positive TTL level
	C	H. V. sync composite, positive
	a	H. sync: Positive TTL level V. sync: Positive TTL level (AT&T)
	b	H. sync: Negative TTL level V. sync: Negative TTL level (IBM, JAPANESE)
	c	H. V. sync composite, negative

3. Setting the signal color display mode

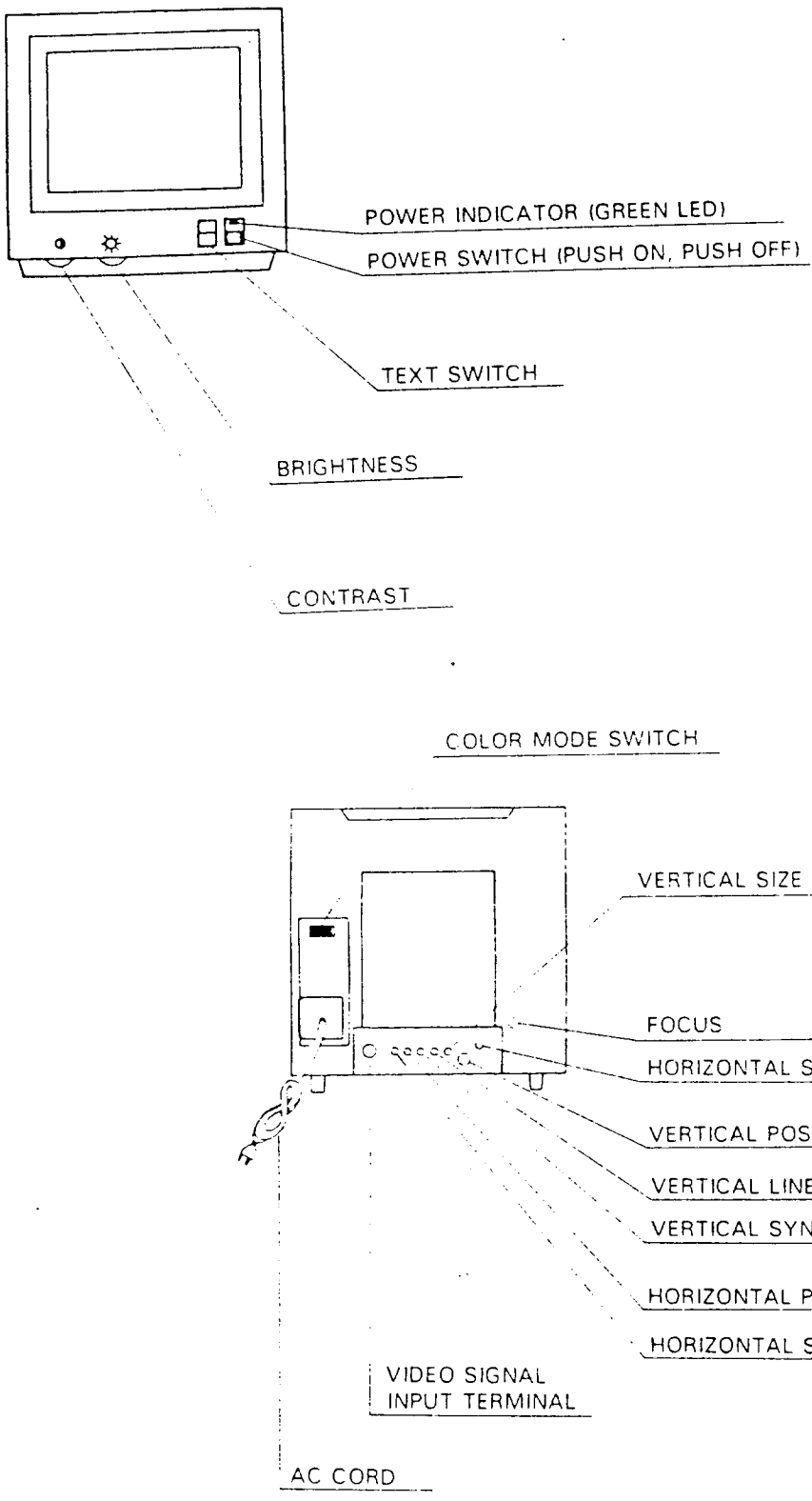
Turning of the TEXT switch (on the front of the unit) changes the display to single-color mode. Super Vision monitor can now be used as a monochrome display monitor. There are four basic monochrome modes: green, amber, reversed white, and white on blue. The monochrome mode is set by the third and fourth DIP switches as follows.

Color	Color mode switch
Green	
Amber	
** Reversed white	
** White on blue	

**Note: In reversed white or white on blue mode, the following phenomena may appear as described on the right.
These are quite normal for this mode.


Uppermost raster does not appear or its disappearing position varies depending on the brightness.
One or both ends are brighter than other areas.
Lowest two or three rasters run off the screen

INDICATORS AND CONTROLS



ADJUSTING THE DISPLAY

1. H. SIZE

If the horizontal size of the screen image is too short or too long, adjust the H. SIZE control for the correct size. (See illustration 1.)

2. V. SIZE

If the vertical size of the screen image is too short or too long, adjust the V. SIZE control for the correct size. (See illustration 2.)

3. H. POSI.

If the screen image shifts horizontally, adjust the H. POSI. control for a correct image. (See illustration 3.)

4. V. POSI.

If the screen image shifts vertically, adjust the V. POSI. control for a correct image. (See illustration 3.)

5. H. HOLD

If the screen image has horizontal stripes or if the image moves left or right, adjust the H. HOLD control for a clear stable image. (See illustration 4.)

6. V. HOLD

If the screen image moves or overlaps vertically, adjust the V. HOLD control for a stable image. (See illustration 4.)

7. FOCUS

Adjust the focus for the sharpest image. (See illustration 6.)

8. V. LIN.

Adjust the V. LIN control so the height of characters is even over the whole screen. (See illustration 7.)

9. CONTRAST

Turning the CONTRAST control clockwise increases the contrast, turning it counterclockwise decreases the contrast.

10. BRIGHT

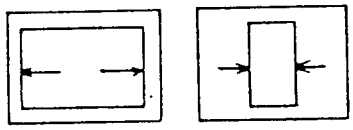
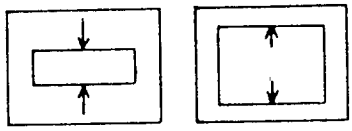
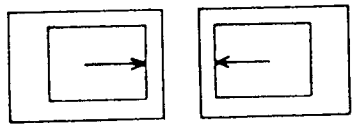
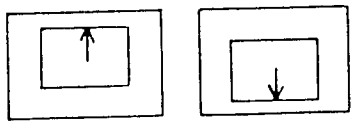
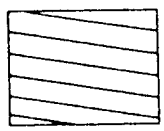
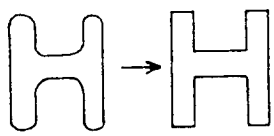
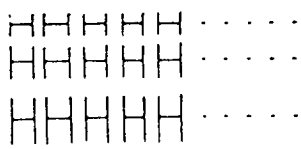
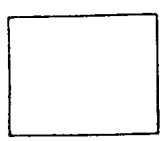
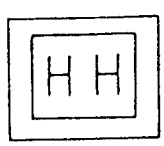
Turning the BRIGHT control clockwise makes the screen brighter, turning it counterclockwise makes it darker.

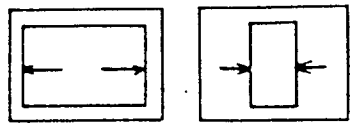
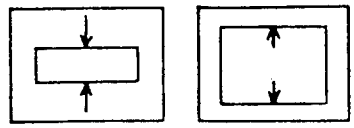
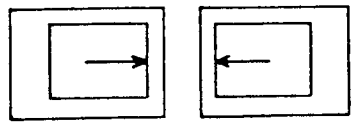
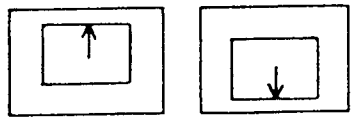
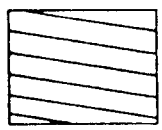
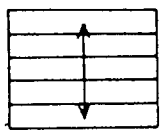
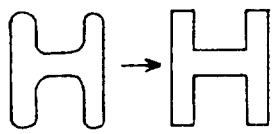
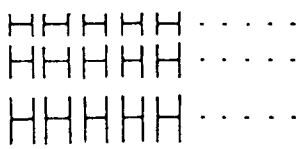
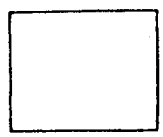
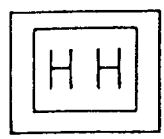
11. SUB-CONTRAST

To adjust the subcontrast, display a screen of characters then turn the BRIGHT control to the click-stop position, and the CONTRAST control fully clockwise. Now adjust the SUB-CONTRAST control (VR140) to the position just before the characters become saturated.

12. H. CENTER

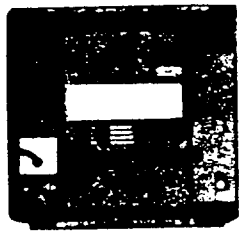
To adjust horizontal centering turn the BRIGHT and the CONTRAST controls fully clockwise with nothing displayed on the screen. Then adjust the H. CENTER VR (R742) so that the raster is centered on the screen.

	Problems		Adjustment
1	Width of the image is not correct.		H. SIZE Wide Narrow
2	Height of the image is not correct.		V. SIZE Wide Narrow
3	Position of the image is not correct.		H. POSITION Right Left
			V. POSITION Up Down
4	The image has a diagonal stripes.		H. HOLD
5	The image moves vertically (flops).		V. HOLD
6	The image is blurred.		FOCUS
7	Character heights on the screen are not uniform.		V. LIN
8	There is no image.		CONTRAST Bright Dark
9	The screen is dark.		BRIGHT Bright Dark

	Problems		Adjustment
1	Width of the image is not correct.		H. SIZE Wide Narrow
2	Height of the image is not correct.		V. SIZE Wide Narrow
3	Position of the image is not correct.		H. POSITION Right Left
			V. POSITION Up Down
4	The image has a diagonal stripes.		H. HOLD
5	The image moves vertically (flops).		V. HOLD
6	The image is blurred.		FOCUS
7	Character heights on the screen are not uniform.		V. LIN
8	There is no image.		CONTRAST Bright Dark
9	The screen is dark.		BRIGHT Bright Dark

DISASSEMBLY PROCEDURE

The following pictures show the basis chassis. Individual products may be different in details.



(Fig. 1-1)

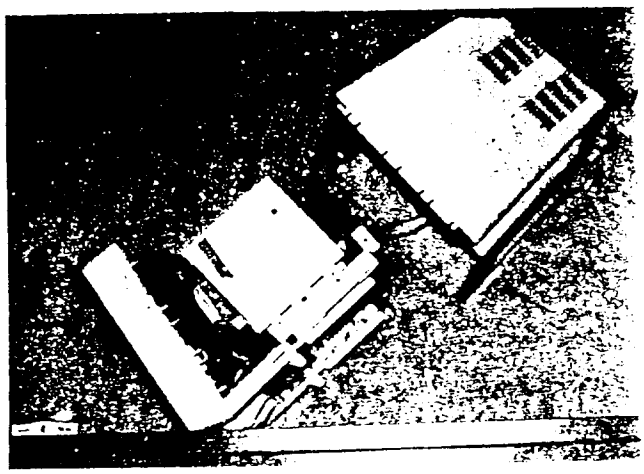
1. REMOVING THE BACK COVER

(1) Unplug the unit from the wall outlet.

(2) Remove the two screws ①from the bottom, the two screws ②from the top, and the three screws ③from the rear of the set. (Fig. 1-1)

(3) Remove back cover.

(4) Re-assemble in reverse order.



(Fig. 1-2)

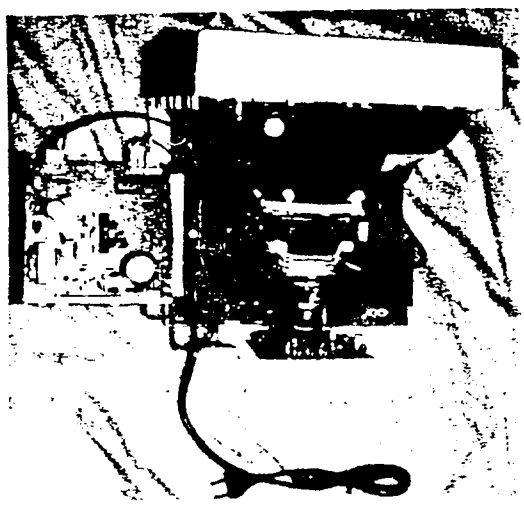
NOTE: Tilting the front block by 45° helps when re-assembling back cover. (Fig. 1-2)

2. SERVICING THE POWER SUPPLY BLOCK

(1) Remove the screw ④. (Fig. 1-2)

(2) Disconnect power supply connectors I, II, III, IV. (Fig. 2-1)

NOTE: Connector names are as follows.
I A.C. Power Cord Connector.
II Power Switch Connector.
III Auto Degaussing Connector.
IV B Connector.



(Fig. 2-1)

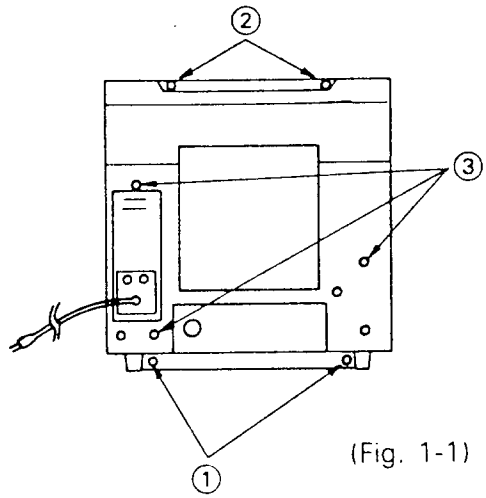
(3) Remove the screw ⑥and take off the I. C. holding metal plate ⑦. (Fig. 2-1)

(4) Remove the screw ⑤ and slide the power supply PWB to the front. (Fig. 1-2, Fig. 1-3)

(5) Re-assemble in reverse order.

DISASSEMBLY PROCEDURE

The following pictures show the basis chassis. Individual products may be different in details.



(Fig. 1-1)

1. REMOVING THE BACK COVER

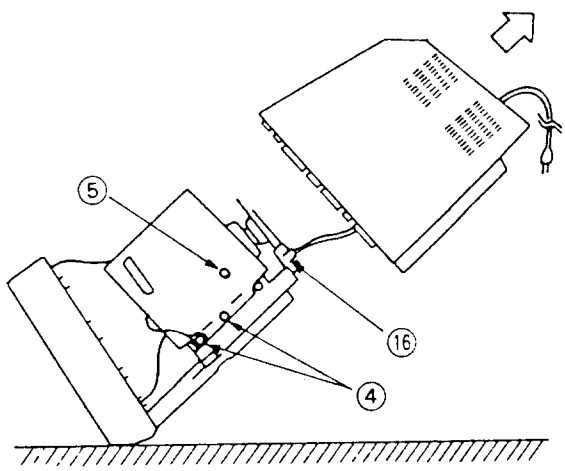
(1) Unplug the unit from the wall outlet.

(2) Remove the two screws ①from the bottom, the two screws ②from the top, and the three screws ③from the rear of the set. (Fig. 1-1)

(3) Remove back cover.

(4) Re-assemble in reverse order.

NOTE: Tilting the front block by 45° helps when re-assembling back cover. (Fig. 1-2)



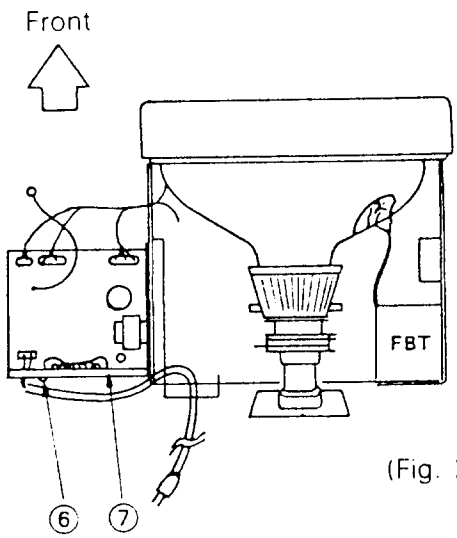
(Fig. 1-2)

2. SERVICING THE POWER SUPPLY BLOCK

(1) Remove the screw ④. (Fig. 1-2)

(2) Disconnect power supply connectors I, II, III, IV. (Fig. 2-1)

NOTE: Connector names are as follows:
I) A.C. Power Cord Connector.
II) Power Switch Connector
III) Auto Degaussing Connector.
IV) B Connector

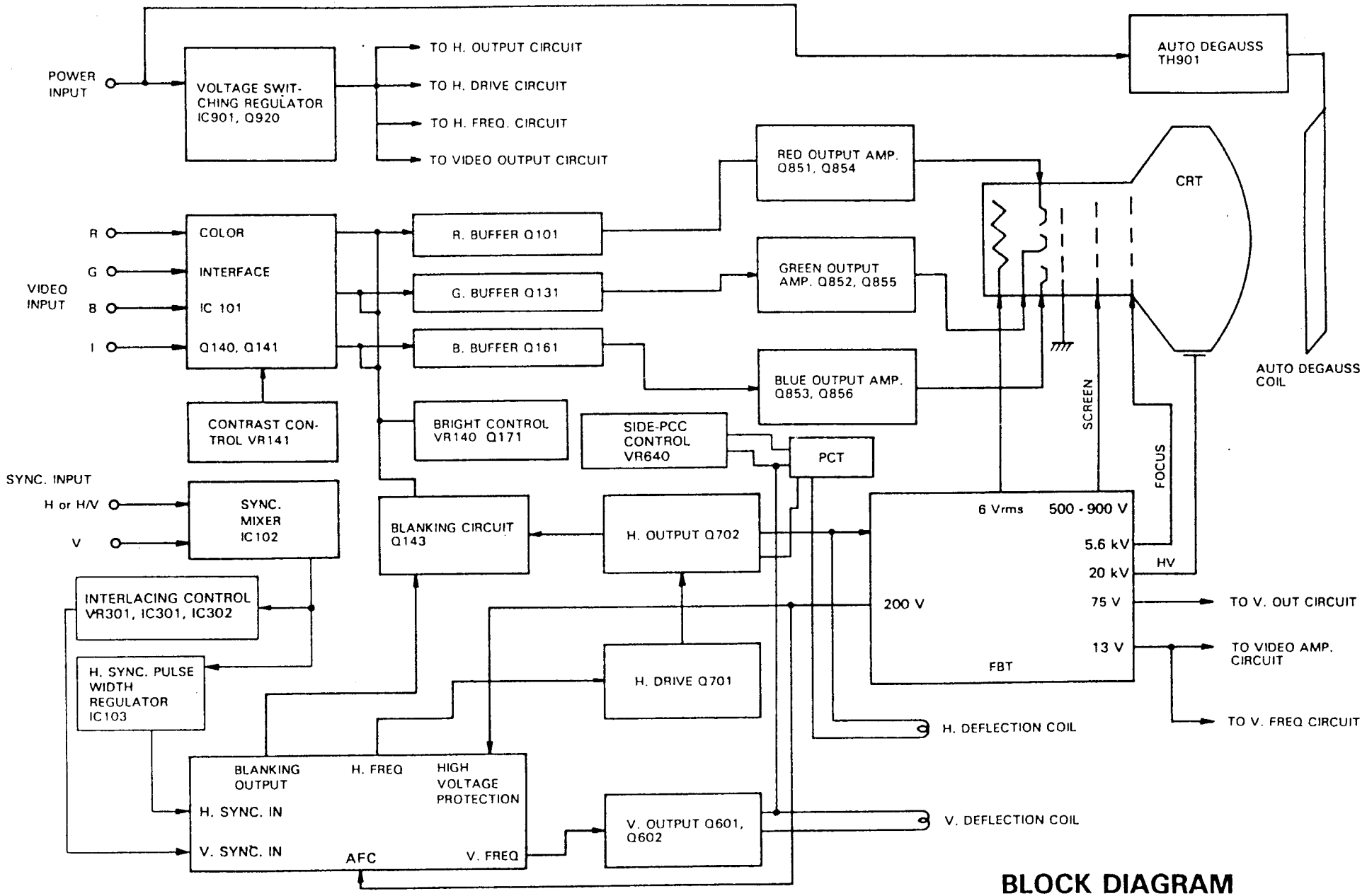


(Fig. 2-1)

(3) Remove the screw ⑥and take off the I. C. holding metal plate ⑦. (Fig. 2-1)

(4) Remove the screw ⑤ and slide the power supply PWB to the front. (Fig. 1-2, Fig. 2-1)

(5) Reassemble in reverse order.

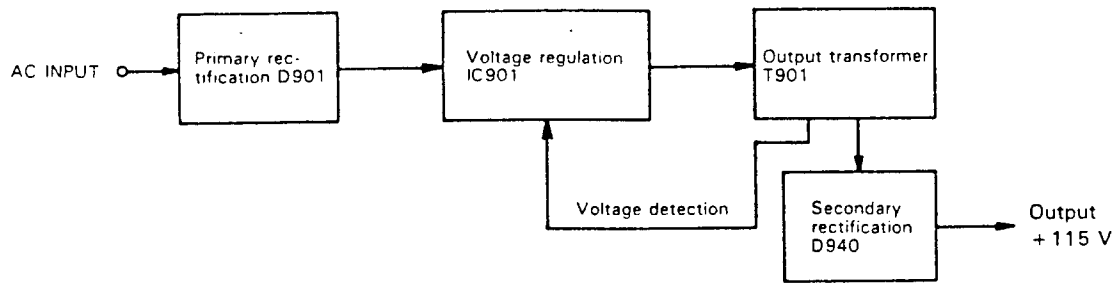


BLOCK DIAGRAM

[Version I]

1. Operation Principles

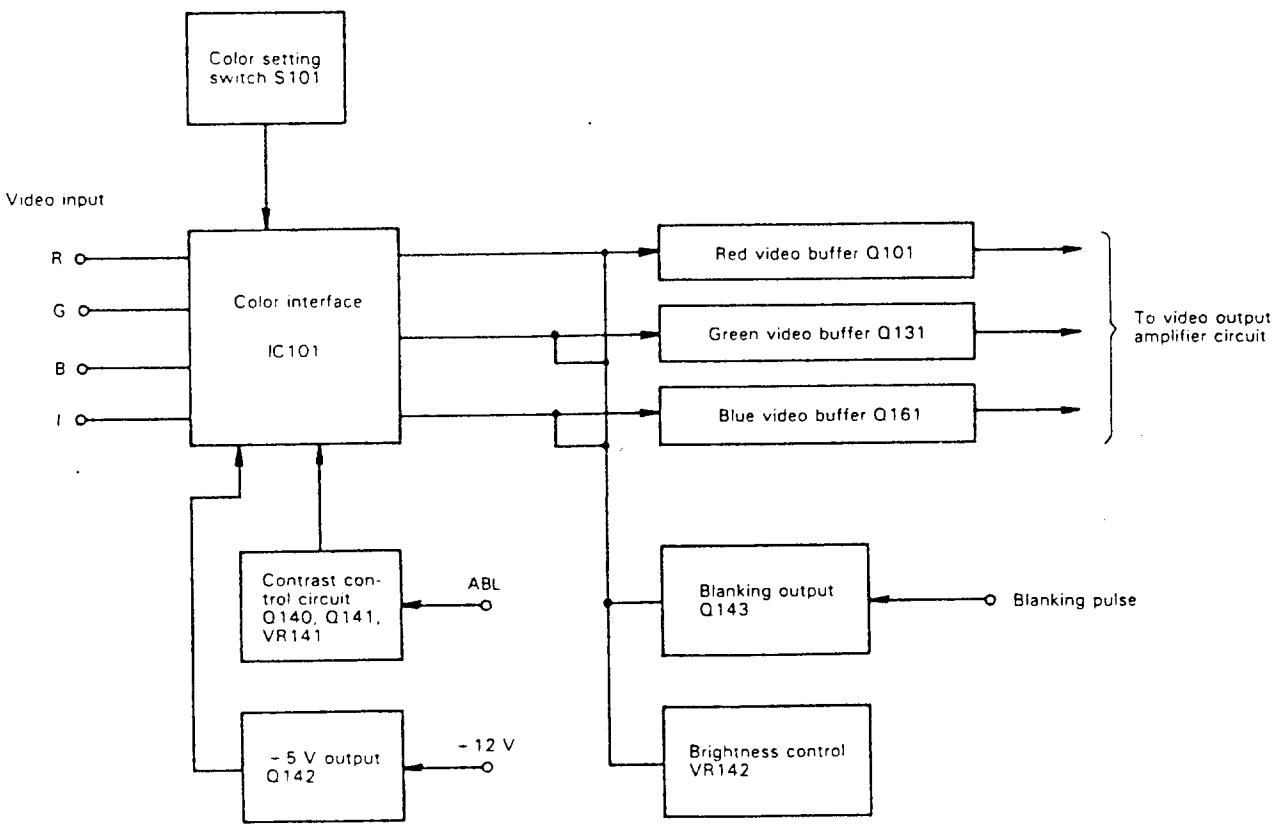
1-1 Voltage regulator circuit



The voltage regulator circuit of this unit uses a switching regulator system. In other words, the input AC supply voltage is rectified to unfiltered DC voltage by the primary rectifier circuit. This voltage is converted to high-frequency pulses by the voltage regulator IC (IC901) which simultaneously performs pulse width control for regulation of a secondary rectification output. The DC output with no ripple (+115V) is obtained by the secondary rectifier D940 following the passage through the output transformer T901. This IC has a built-in overcurrent protection circuit.

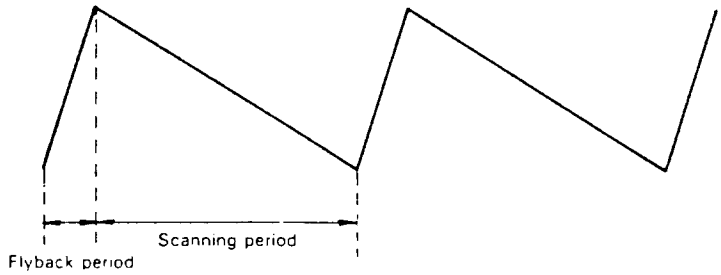
1-2 Video circuit

(1) Color interface circuit

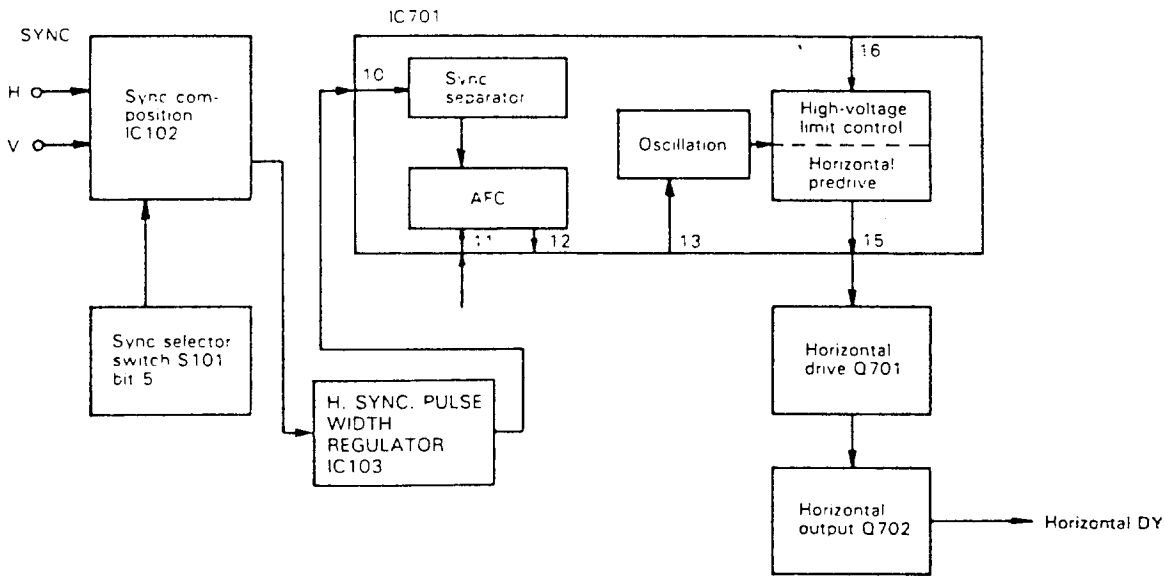


The input video signals R, G, B, I are combined by IC101 into optional colors (e.g. IBM colors, Apple colors, standard colors) set up by the color setting switch S101 and sent to the respective video buffers (Q101, Q131, Q161). The output voltage level of the color interface IC101

The sawtooth oscillating voltage is generated by the charge and discharge of C603. During a vertical flyback period, C603 is charged from pin ③ of the IC701 by the switching transistor inside the IC. During a scanning period, it is discharged by the resistor R602 and the vertical linearlity control VS701 ④ connected to pin ④ of the IC. As a result, the potential slowly decreases. When this potential reaches the same level as that applied to pin ⑦ of the IC, the charging starts again by the switching transistor in the IC, corresponding to the flyback period. Meanwhile, the output voltage applied to the deflection yoke is amplified by the amplifier circuit inside the IC and applied to the vertical output transistor Q601, Q602 from pin ① of the IC. These transistors drive the vertical DY.



1-4 Horizontal deflection circuit



(1) AFC circuit

The triangular voltage generated from the flyback transformer pulses is applied to pin ⑪ of the IC701 and the sync signal is applied directly to the AFC circuit from the sync separator circuit inside the IC. The AFC circuit compares the phase between these signals and outputs from pin ⑫ of the IC the current proportional to the phase difference. This current is sent from pin ⑬ of the IC via the resistor R702 to the horizontal oscillator circuit for oscillating frequency control.

(2) Oscillator circuit

A triangular oscillating voltage is generated by the capacitors C703, C732. C703 and C732 are charged via the resistors R703, R704 and the H. HOLD control VS701 ① and discharged by the internal circuit of the IC.
From this triangular wave is created a rectangular wave with a duty ratio of 1 to 2 which is output from the pin ⑮ of the IC

PARTS LIST

: for Version 1 /: for Version 2

No.	Component	Symbol no.	Ratings			Parts no.	Remarks
26	Resistor	R145, R146, R711	10k ohm,	1/8 W,	Carbon film	01000089	
	Resistor	R308*	10k ohm,	1/8 W,	Carbon film	01000089G	
27	Resistor	R603, R929	13k ohm,	1/8 W,	Carbon film	01000092	
28	Resistor	R301*	15k ohm,	1/8 W,	Carbon film	F020084T	
	Resistor	R737	15k ohm,	1/8 W,	Carbon film	01000093G	
29	Resistor	R607	18k ohm,	1/8 W,	Carbon film	01000095G	
30	Resistor	R602	22k ohm,	1/8 W,	Carbon film	01000097	
	Resistor	R935	22k ohm,	1/8 W,	Carbon film	01000097G	
31	Resistor	R706	33k ohm,	1/8 W,	Carbon film	01000101	
32	Resistor	R115	75k ohm,	1/8 W,	Carbon film	01000110	
33	Resistor	R725	150k ohm,	1/8 W,	Carbon film	01000117G	
34	Resistor	R857, R859, R861	180k ohm,	1/8 W,	Carbon film	01000119G	
	Resistor	R878, R879, R880	180k ohm,	1/8 W,	Carbon film	01000119G	
35	Resistor	R726	270k ohm,	1/8 W,	Carbon film	01000117	
36	Resistor	R930	4.7 ohm,	1/4 W,	Carbon film	0114009T	
37	Resistor	R610	8.2 ohm,	1/4 W,	Carbon film	0114015	
38	Resistor	R860, R862	100 ohm,	1/4 W,	Carbon film	0114131T	
39	Resistor	R129	680 ohm,	1/4 W,	Carbon film	0114151	
40	Resistor	R928	1k ohm,	1/4 W,	Carbon film	0114161T	
41	Resistor	R881	1.8k ohm,	1/4 W,	Carbon film	0114167T	
42	Resistor	R883	2.2k ohm,	1/4 W,	Carbon film	0114169T	
43	Resistor	R882	2.7k ohm,	1/4 W,	Carbon film	0114171T	
44	Resistor	R722	3.3k ohm,	1/4 W,	Carbon film	0114173	
45	Resistor	R921	3.9k ohm,	1/4 W,	Carbon film	0114175T	
46	Resistor	R728	6.8k ohm,	1/4 W,	Carbon film	0114181T	
	Resistor	R734	6.8k ohm,	1/4 W,	Carbon film	0114181	
47	Resistor	R738	30k ohm,	1/4 W,	Carbon film	0114212	
48	Resistor	R730	39k ohm,	1/4 W,	Carbon film	0114215	
49	Resistor	R723	3.9 kohm	1/2 W,	Carbon film	F020014T	U
	Resistor	R723	3.9 kohm	1/2 W,	Carbon film	0100007	EABS
50	Resistor	R309*	4.7 ohm,	1/2 W,	Carbon film	F020088T	
51	Resistor	R858	39 ohm,	1/2 W,	Carbon film	F020038G	
52	Resistor	R620	56 ohm,	1/2 W,	Carbon film	F020042	
53	Resistor	R854, R855, R856	150 ohm,	1/2 W,	Carbon film	F020052G	
54	Resistor	R631	470 ohm,	1/2 W,	Carbon film	F020064	
	Resistor	R633	470 ohm,	1/2 W,	Carbon film	F020064T	
	Resistor	R926, R927	470 ohm,	1/2 W,	Carbon film	F020064G	
55	Resistor	R630, R632	680 ohm,	1/2 W,	Carbon film	F020068	
56	Resistor	R618	1.1k ohm,	1/2 W,	Carbon film	F020073G	
57	Resistor	R615, R616	3.3k ohm,	1/2 W,	Carbon film	F020084	
58	Resistor	R955, R956	4.7Mk ohm,	1/2 W,	Metal	F040201	
59	Resistor	R733	18k ohm,	1 W,	Metal oxide	0110175	
60	Resistor	R923	68k ohm,	1 W,	Metal oxide	F040023	
61	Resistor	R924, R925	120k ohm,	1 W,	Metal oxide	F040022	
62	Resistor	R920	1 ohm,	2 W,	Metal oxide	F040033	
63	Resistor	R922	39 ohm,	2 W,	Metal oxide	0110211	
64	Resistor	R851, R852, R853	910 ohm,	2 W,	Metal oxide	0110244G	
	Resistor	R875, R876, R877	910 ohm,	2 W,	Metal oxide	0110244G	
65	Resistor	R832	3.3k ohm,	2 W,	Metal oxide	0110257G	
66	Resistor	R802	8.2k ohm,	2 W,	Metal oxide	0110267G	
67	Resistor	R720	3.3k ohm,	5 W,	Metal oxide	F040042	
68	Resistor	R701	5.6k ohm,	5 W,	Metal oxide	F040041	

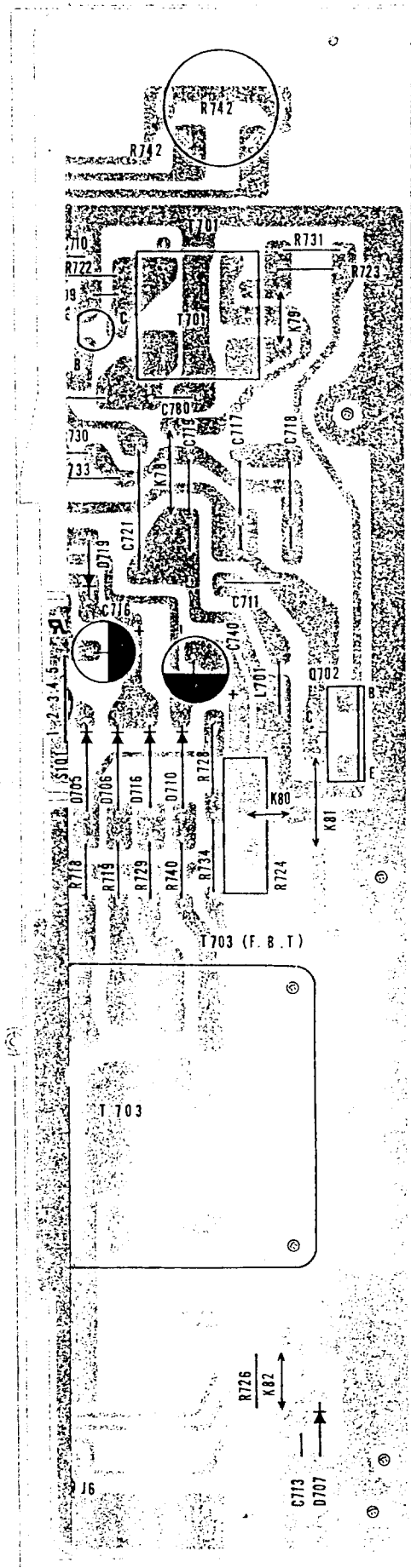
PARTS LIST

: for Version 1 /: for Version 2

No.	Component	Symbol no.	Ratings			Parts no.	Remarks
115	Capacitor	C861	180 pF,	50 V,	Ceramic	0244116F	
116	Capacitor	C862	220 pF,	50 V,	Ceramic	0244230F	
117	Capacitor	C618, C304	560 pF,	50 V,	Ceramic	0244115F	
118	Capacitor	C617	680 pF,	50 V,	Ceramic	0244117F	
119	Capacitor	C704	2200 pF,	50 V,	Ceramic	0244105F	
120	Capacitor	C143, C151, C152	0.01 μF,	50 V,	Ceramic	0244171F	
	Capacitor	C153, C154, C155	0.01 μF,	50 V,	Ceramic	0244171F	
	Capacitor	C122, C602, C868	0.01 μF,	50 V,	Ceramic	0244171F	
	Capacitor	C867, C870	0.01 μF,	50 V,	Ceramic	0244171F	
121	Capacitor	C902, C903	1000 pF,	125 V,	Ceramic	F150261	U
12	Capacitor	C904, C905, C906	4700 pF,	400 V,	Ceramic	0249159	
	Capacitor	C907, C955, C956	4700 pF,	400 V,	Ceramic	0249159	
123	Capacitor	C612	180 pF,	500 V,	Ceramic	F160033F	
124	Capacitor	C709	220 pF,	500 V,	Ceramic	F160034F	
125	Capacitor	C710	820 pF,	500 V,	Ceramic	F160041F	
126	Capacitor	C712	1000 pF,	500 V,	Ceramic	F160042F	
127	Capacitor	C610	4700 pF,	500 V,	Ceramic	F160050F	
	Capacitor	C851, C852, C853	4700 pF,	500 V,	Ceramic	0244565F	
	Capacitor	C857, C858, C859	4700 pF,	500 V,	Ceramic	0244565F	
	Capacitor	C866	4700 pF,	500 V,	Ceramic	0244565F	
128	Capacitor	C923, C927, C944	1000 pF,	1k V,	Ceramic	F160102	
129	Capacitor	C805	1500 pF,	1k V,	Ceramic	F150453	
	Capacitor	C925	1500 pF,	1k V,	Ceramic	F160104	
130	Capacitor	C924	3300 pF	1k V,	Ceramic	F160108	
131	Capacitor	C182, C183, C184	47 pF,	50 V,	Ceramic	0248676	
	Capacitor	C185	47 pF,	50 V,	Ceramic	0248676	
132	Capacitor	C603	1 pF,	25 V,	Ceramic	0292706F	
133	Capacitor	C113	33 pF,	50 V,	Ceramic	0248676	
134	Capacitor	C730	33 pF,	500 V,	Ceramic	F160078F	
135	Capacitor	C110	120 pF,	50 V,	Ceramic	0244228F	
136	Capacitor	C940	180 pF,	2500 V,	Ceramic	0243839	
137	Capacitor	C711	330 pF,	2500 V,	Ceramic	0243837	
138	Capacitor	C703	5600 pF,	50 V,	Polyester film	0279211F	
139	Capacitor	C722	2200 pF,	50 V,	Polyester film	F150102F	
140	Capacitor	C706	0.01 μF,	50 V,	Polyester film	F150118F	
141	Capacitor	C705	0.015 μF,	50 V,	Polyester film	F150122F	
142	Capacitor	C302*, C303*, C604	0.022 μF,	50 V,	Polyester film	F150126F	
	Capacitor	C713	0.022 μF,	50 V,	Polyester film	F150126F	
143	Capacitor	C605, C731	0.033 μF,	50 V,	Polyester film	F150130F	
144	Capacitor	C301*, C922	0.047 μF,	50 V,	Polyester film	F150134F	
145	Capacitor	C901	0.1 μF,	125 V,	Polyester film	F150244	U
146	Capacitor	C780	0.033 μF,	100 V,	Polypro	0299037F	
147	Capacitor	C723	0.1 μF,	200 V,	Polypro	0299926F	
148	Capacitor	C721	0.12 μF,	200 V,	Polypro	0299927F	
149	Capacitor	C719	0.012 μF,	630 V,	Polypro	0299982F	
150	Capacitor	C717, C718	0.01 μF,	630 V,	Polypro	0299981F	
151	Diode	D101, D102	US1040,		Silicon	F380201	
	Diode	D103, D104	US1040,		Silicon	F380201	
	Diode	D105, D111	US1040,		Silicon	F380201	
	Diode	D112, D113	US1040,		Silicon	F380201	
	Diode	D114, D131	US1040,		Silicon	F380201	

PWB LAYOUT

MAIN PWB



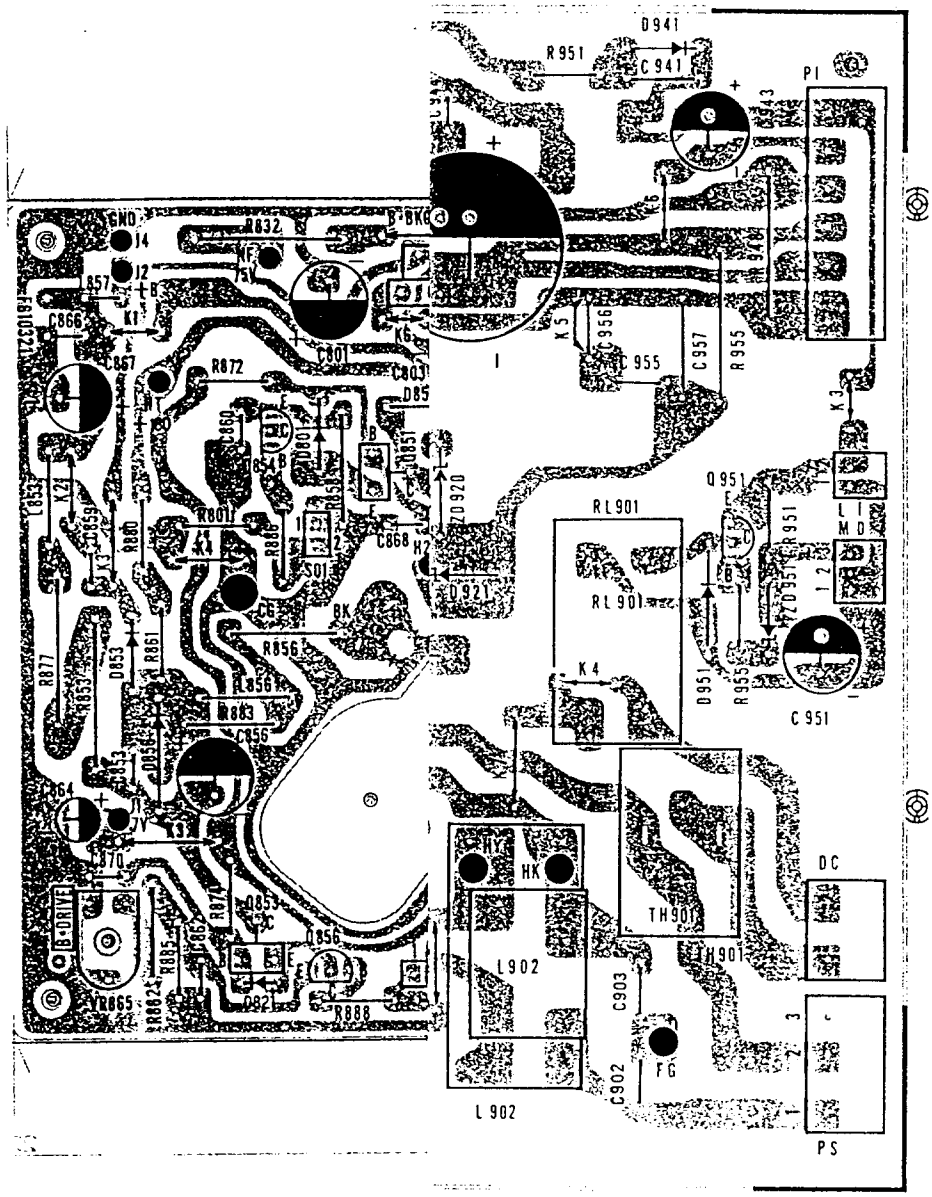
PARTS LIST

: for Version 1 /: for Version 2

No.	Component	Symbol no.	Ratings	Parts no.	Remarks
186	Transistor	Q143, Q854	2SC655C/D	F360281	
	Transistor	Q855, Q856	2SC655C/D	F360281	
187	Transistor	Q142	2SC3179Y/G	F360141	
188	Transistor	Q851, Q852, Q853	2SC2911(S/T)	F360151	
189	Transistor	Q702	2SC3026	F360341	U
190	Transistor	Q601, Q602	2SD386A	F360121	
191	Transistor	Q920	2SD1207	F360231	
192	Transistor	Q141	2SD468C	F360161	
193	Transistor	Q702	2SD1397	F360171	E,B,A,S
194	Coil	L701	Heater choke coil 0.35 μH	2120333	
195	Coil	L708, L724	Filter coil 22 μH	2122094	
196	Coil	L141, L745, L857	Filter coil 100 μH	2120482	
197	Coil	L710	Filter coil 3300 μH	2120484	
198	Coil	L901, L902	Line filter	F330051	
199	Coil	L702	H. SIZE	F320043	
200	Coil	L703	H. LIN	F320052	
201	Coil	L854, L855, L856	4.7 μH Axial	2122235T	
202	Coil	L851, L852	10 μH Axial	2122239T	
203	Coil	L853	100 μH Axial	2122253T	
	Coil	L151, L152, L153	100 μH Axial	2122253F	
	Coil	L154, L155	100 μH Axial	2122253F	
204	Transformer	T701	H. DRIVE	2260071	
205	Transformer	T702	Pin cushion transformer	F330041	
206	Transformer	T901	Switching transformer	F290074	
207	Transformer	T703	Flyback transformer	F310053	
208	Switch	S101	DIP switch	F470081	
209	Switch	S601	SLWK22	F470031	
210	Switch	S102	Multiple switch J-K2188	F470051	
211	Connector	CN101	TCS4480-01-1011	F500051	
212	Thermister	TH901	PTC thermister 120 V	F400001	U
213	Thermister	TH901	PTC thermister 200 V	2340471	E,B,A,S
214	Fuse	F701	Fuse TSCR 0.63 A	F690031	
215	Fuse	F901	Fuse ST3 3.15 A	2720902	U
216	Fuse	F901	Fuse SET 3.15 A	2720402	E,B,A,S

PWB LAYOUT

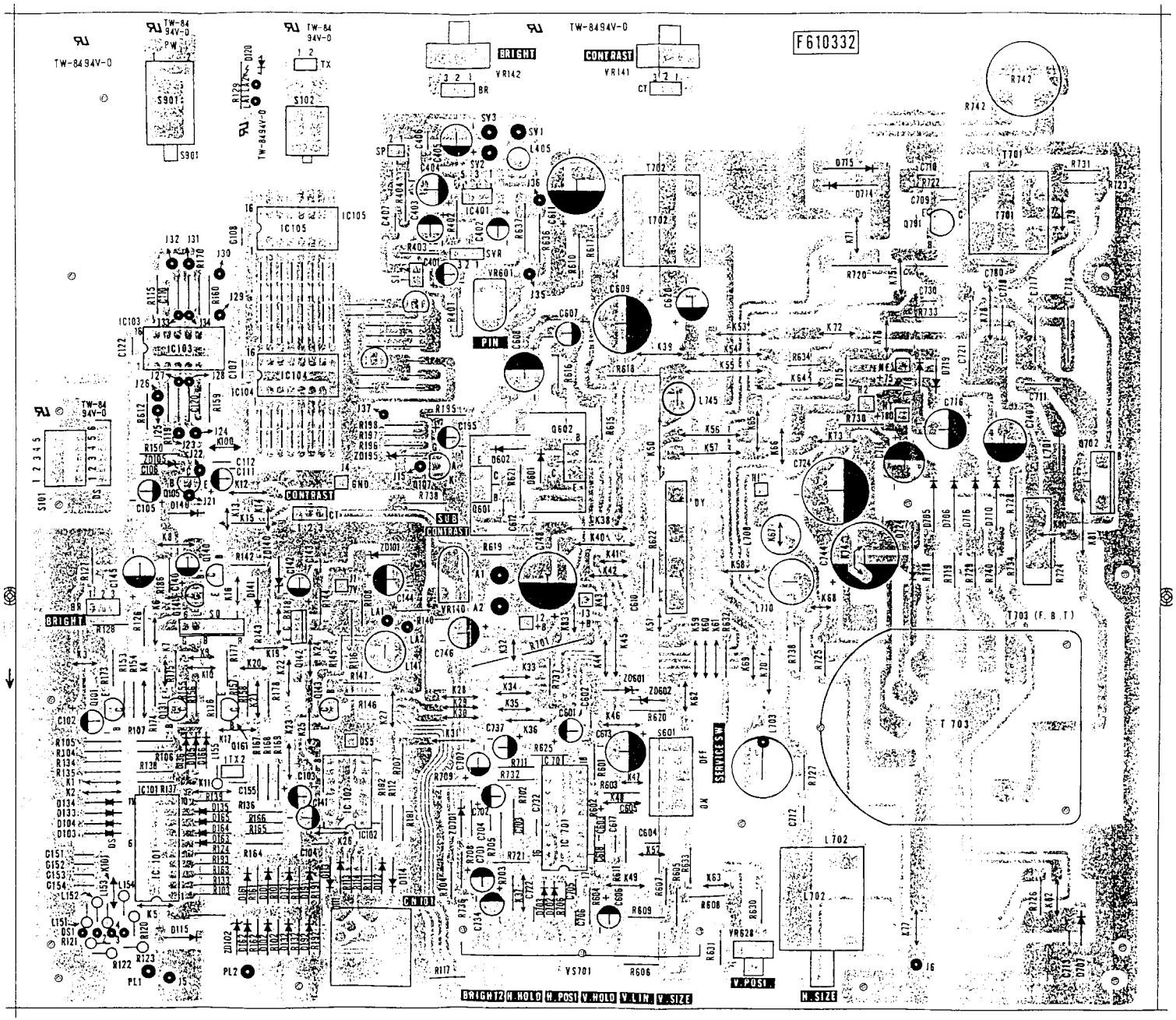
CPT SOCKET PWB



シルク図

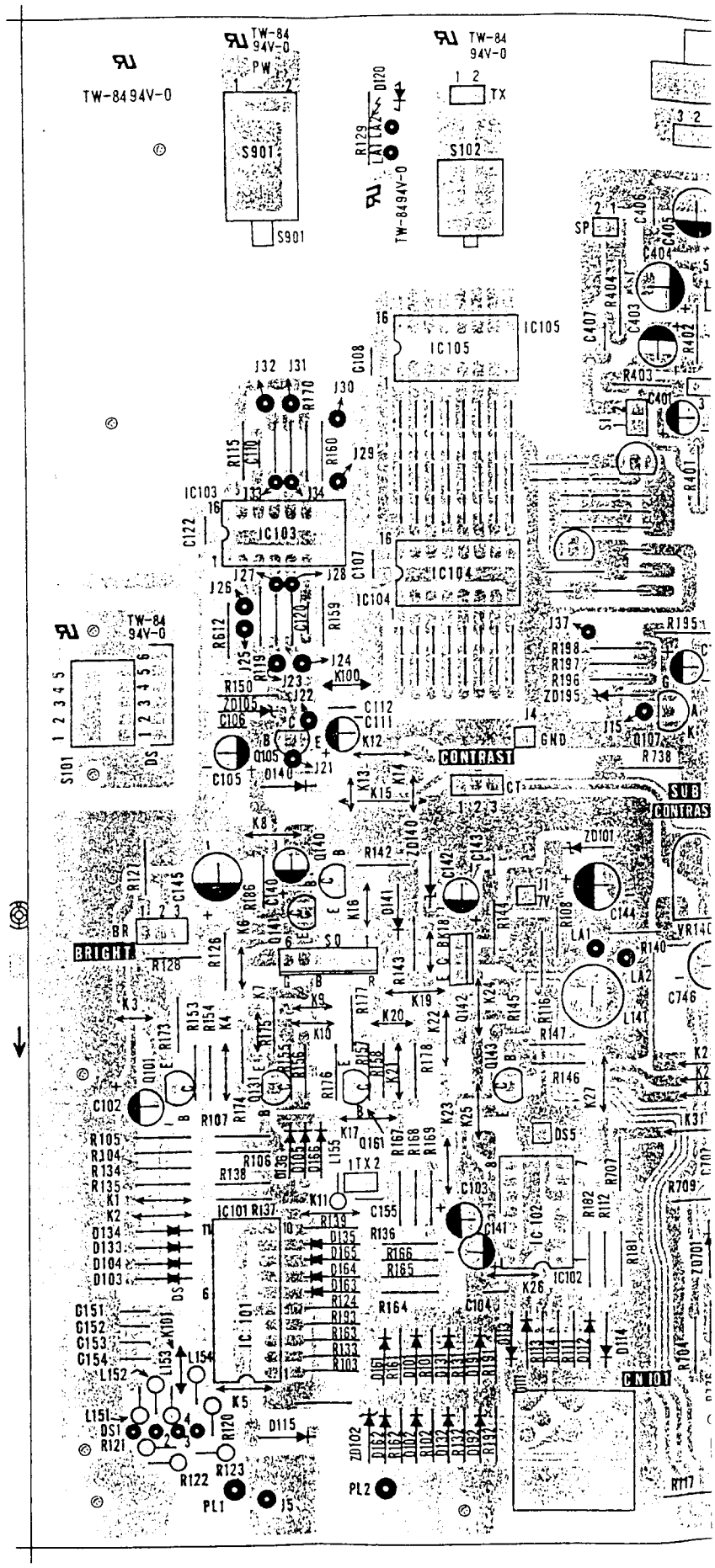
PWB LAYOUT

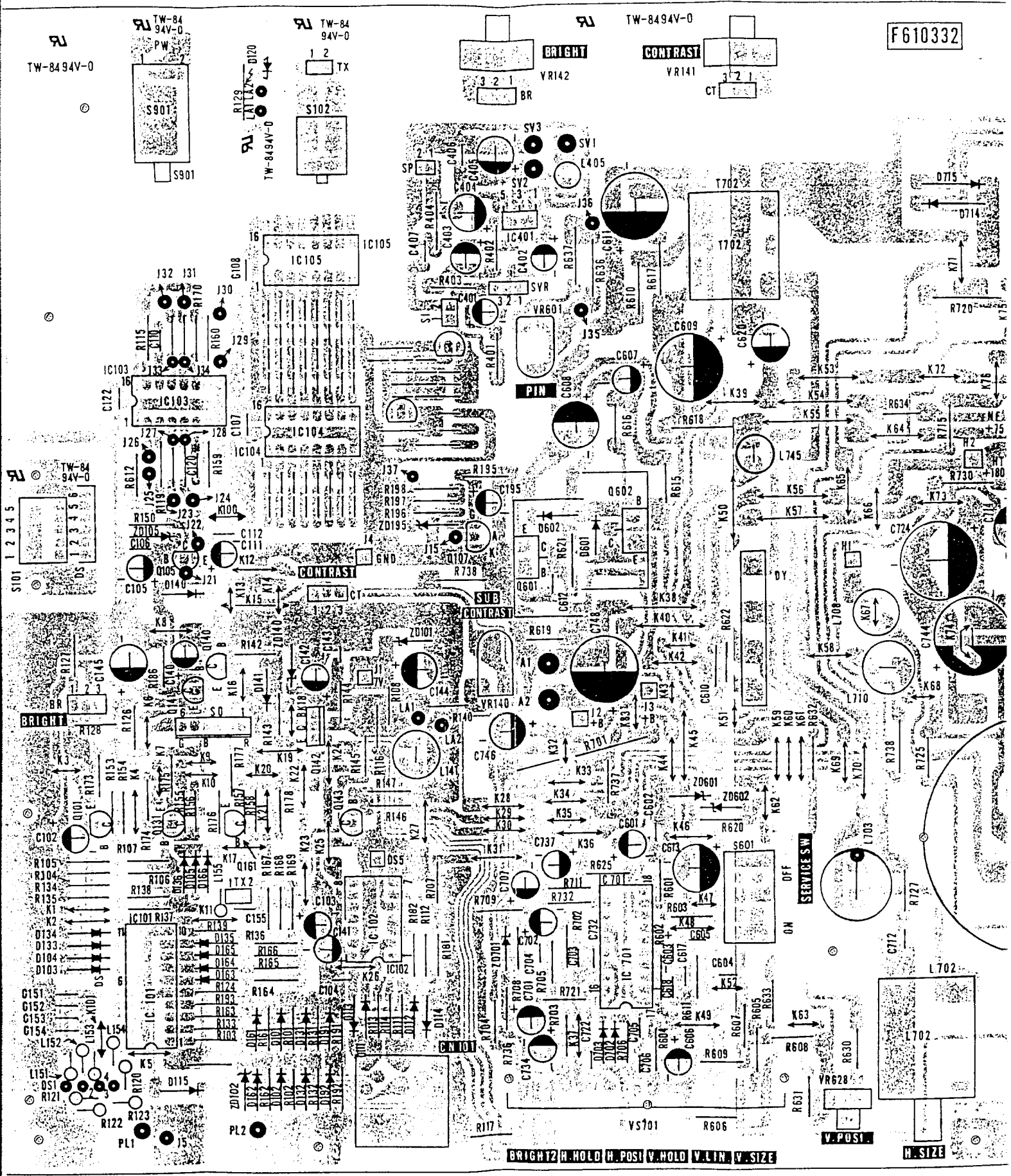
MAIN PWB

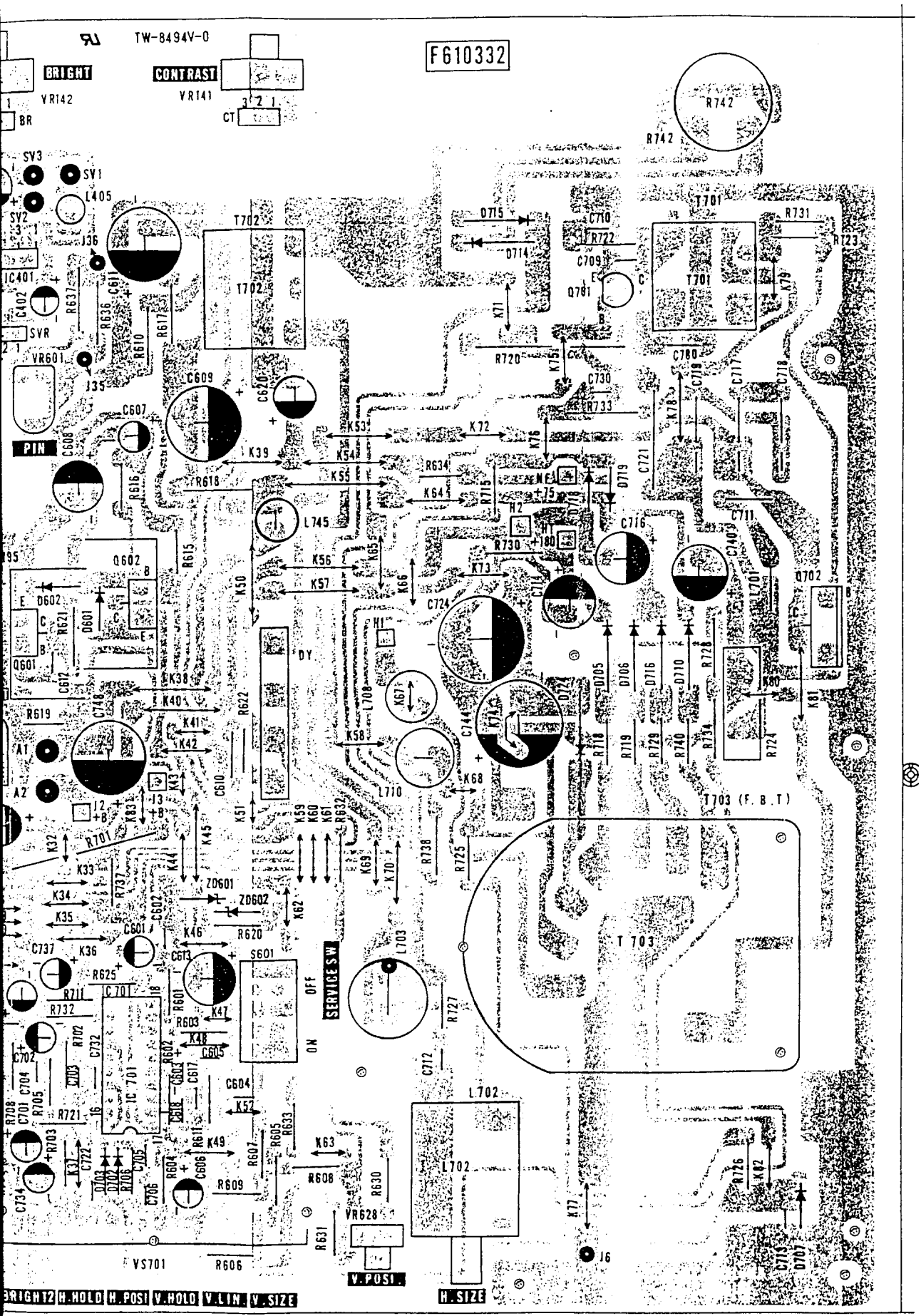


PWB LAYOUT

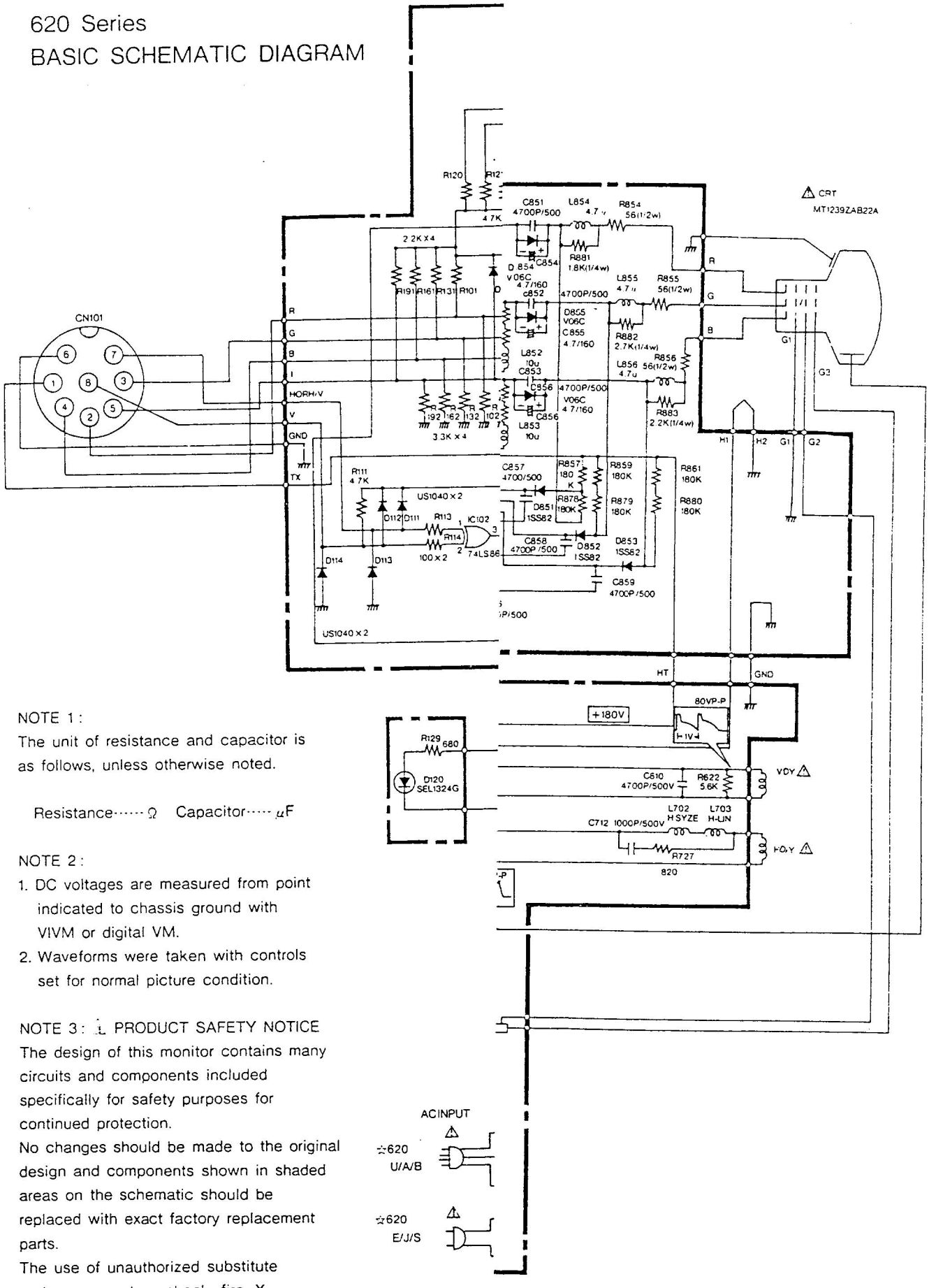
MAIN PWB




F610332
TW-8494V-0
BRIGHT
CONTRAST
VR142
VR141
S901
S102
IC105
IC103
IC104
IC101
IC102
IC701
PIN
SUB CONTRAST
CONTRAST
SERVICE SW
ON
OFF
DY
VS701
CN101
V.POSI.
H.SIZE
BRIGHT2
H.HOLD
H.POST
V.HOLD
V.LIN.
V.SIZE


TW-8494V-0
F610332
BRIGHT
VR142
CONTRAST
VR141
CT
BR
SV3
SV1
SV2
L405
J36
IC401
C402
SVR
VR601
J35
PIN
C609
C620
C607
C608
R616
R618
T702
R610
R617
R636
C611
R637
K39
K53
K54
K55
K72
K76
K64
R634
R715
D719
D718
L745
K56
K57
K65
K66
K50
R615
Q602
D602
D601
R621
Q601
C612
K38
K40
R619
R622
K41
K42
K43
J2
J3
R701
K32
K33
K34
K35
K44
K45
ZD601
ZD602
C602
C601
K46
R620
C737
K36
C613
S601
R625
C701
IC 701
R601
R603
K47
K48
C605
R732
R711
C702
C704
R705
R708
R721
R703
K37
C722
D703
D702
D704
R708
C705
C706
C734
C732
R702
C603
C617
C604
K52
R605
R633
R607
K49
C606
R609
R608
K63
R630
VR628
R631
V.POSI.
R606
VS701
H.SIZE
J6
K77
R726
K82
C715
D707
L702
C712
R727
K74
K67
L708
L710
C724
C744
K68
K58
K59
K60
K61
R632
K69
K70
R738
R725
L703
SERVICE SW
OFF
ON
DY
T703 (F.B.T)
T 703
R742
T701
D715
D714
C710
R722
C709
Q781
K71
R720
K75
C730
R733
C780
C718
C717
K78
C721
R731
R723
K79
R730
+75
+180
H2
H1
C716
C711
C1401
L701
Q702
K73
C714
D705
D706
D716
D710
R728
K80
K81
R724
R729
R740
R734
R718
R719
D724
R723
R737
R102
C732
C617
C618
C602
R602
R604
C606
R611
C705
D703
D702
D704
R708
C706
C722
R703
K31
C734
C701
C704
R705
R708
R721
16
17
18
BRIGHT2
H.HOLD
H.POSI
V.HOLD
V.LIN
V.SIZE

620 Series
BASIC SCHEMATIC DIAGRAM



NOTE 1 :
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance····· Ω Capacitor····· μF

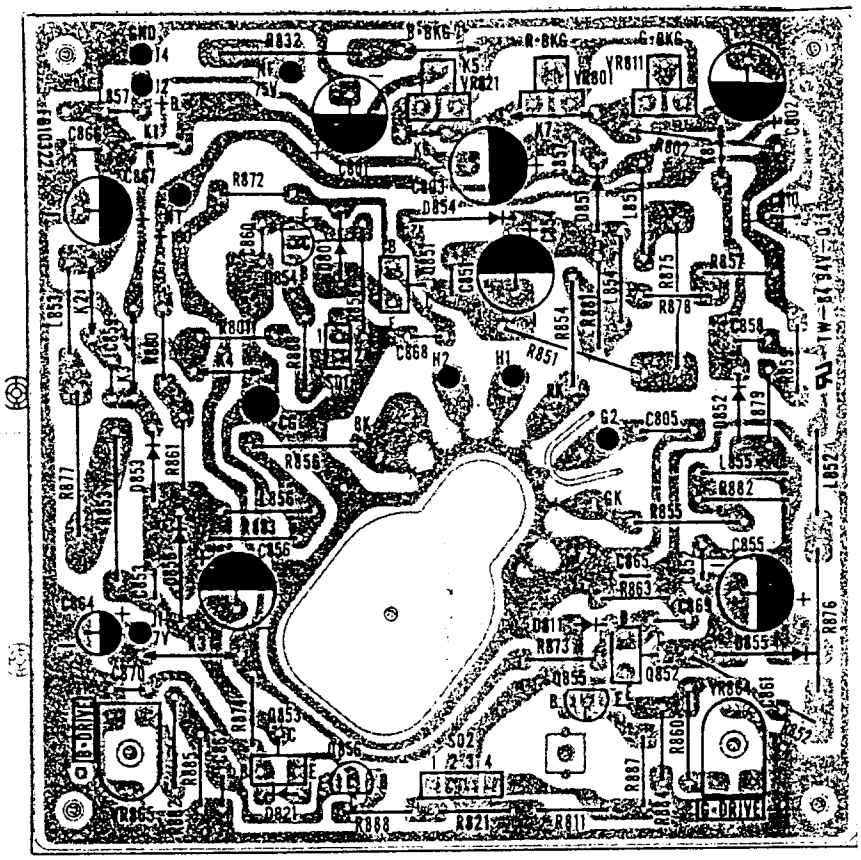
NOTE 2 :
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.

NOTE 3 : ⚠ PRODUCT SAFETY NOTICE
The design of this monitor contains many circuits and components included specifically for safety purposes for continued protection.
No changes should be made to the original design and components shown in shaded areas on the schematic should be replaced with exact factory replacement parts.
The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard.
Service should be performed by qualified presonnel only.

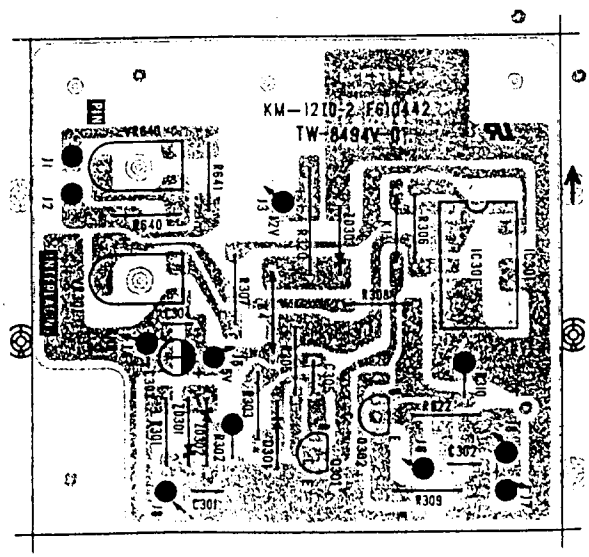
☆
620J
620U
620E/S
620B/A

PWB LAYOUT

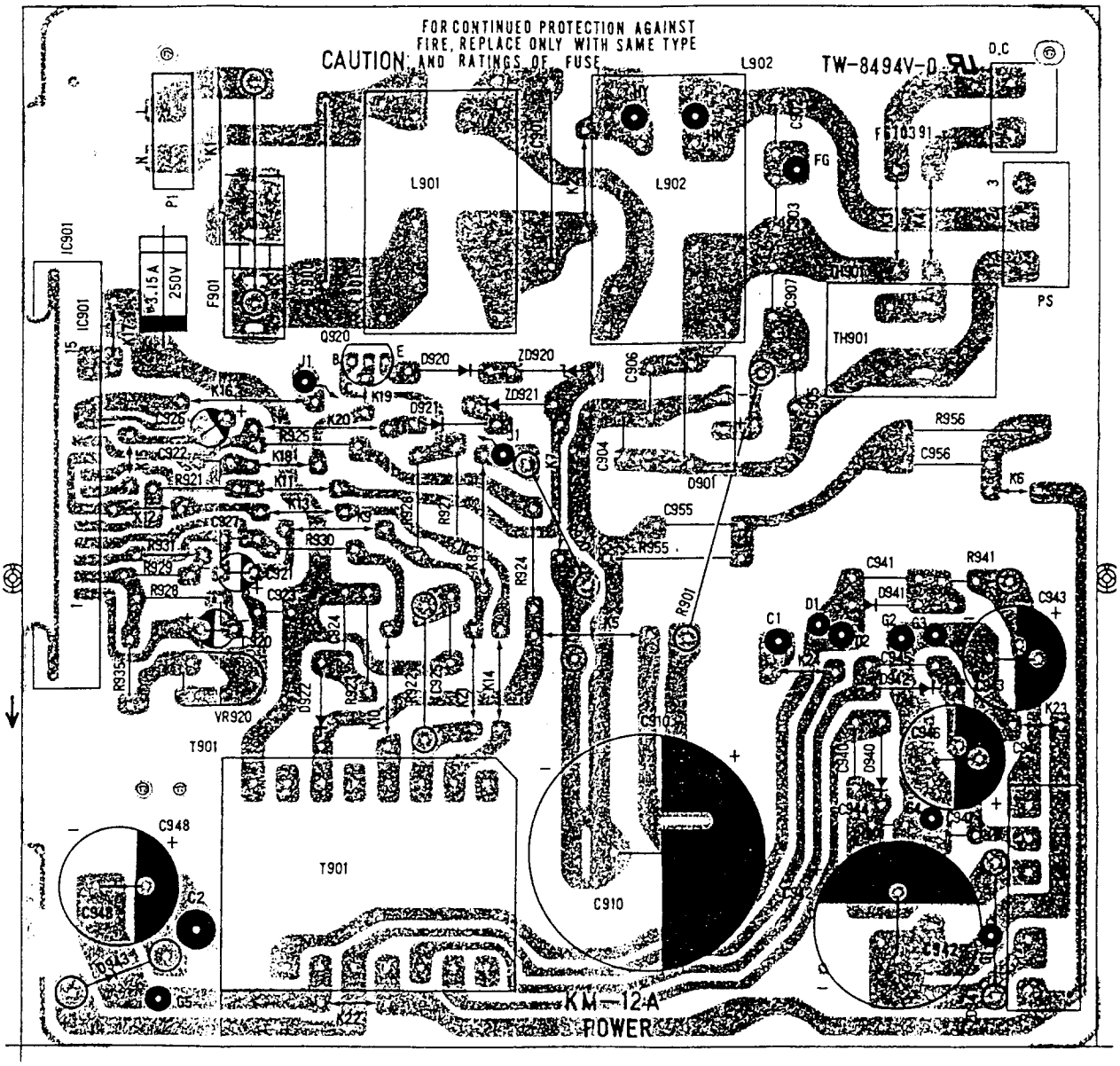
CPT SOCKET PWB



ID PWB

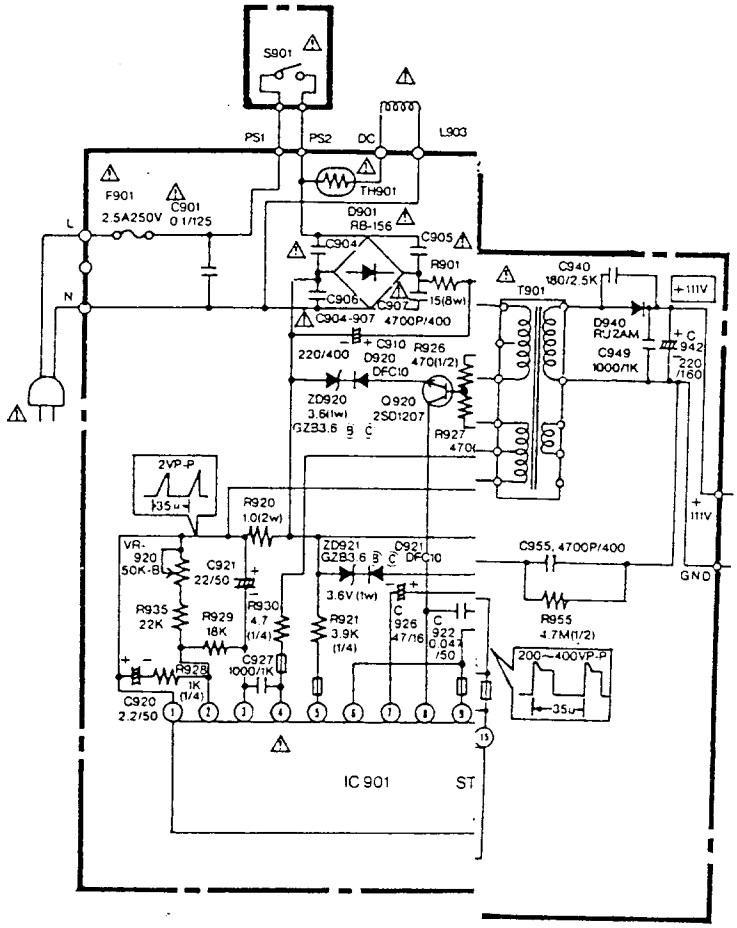


SWITCHING REG. PWB

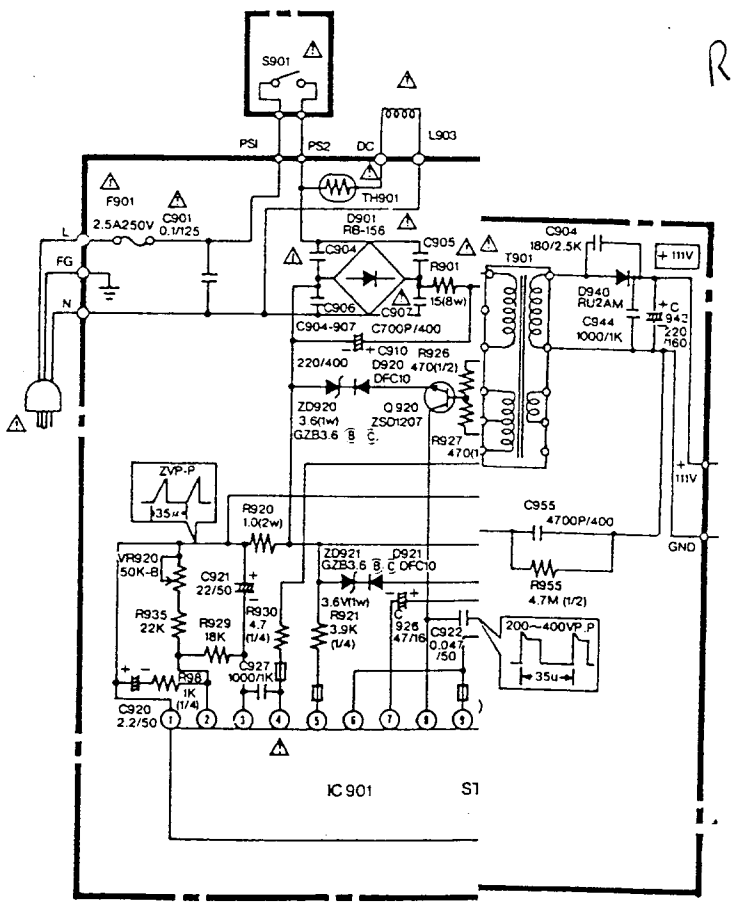


POWER SUPPLY. SCHEMATIC

(1) 620E/S
AC INPUT
220V 50Hz



(2) 620B/A
AC INPUT
240V 50Hz



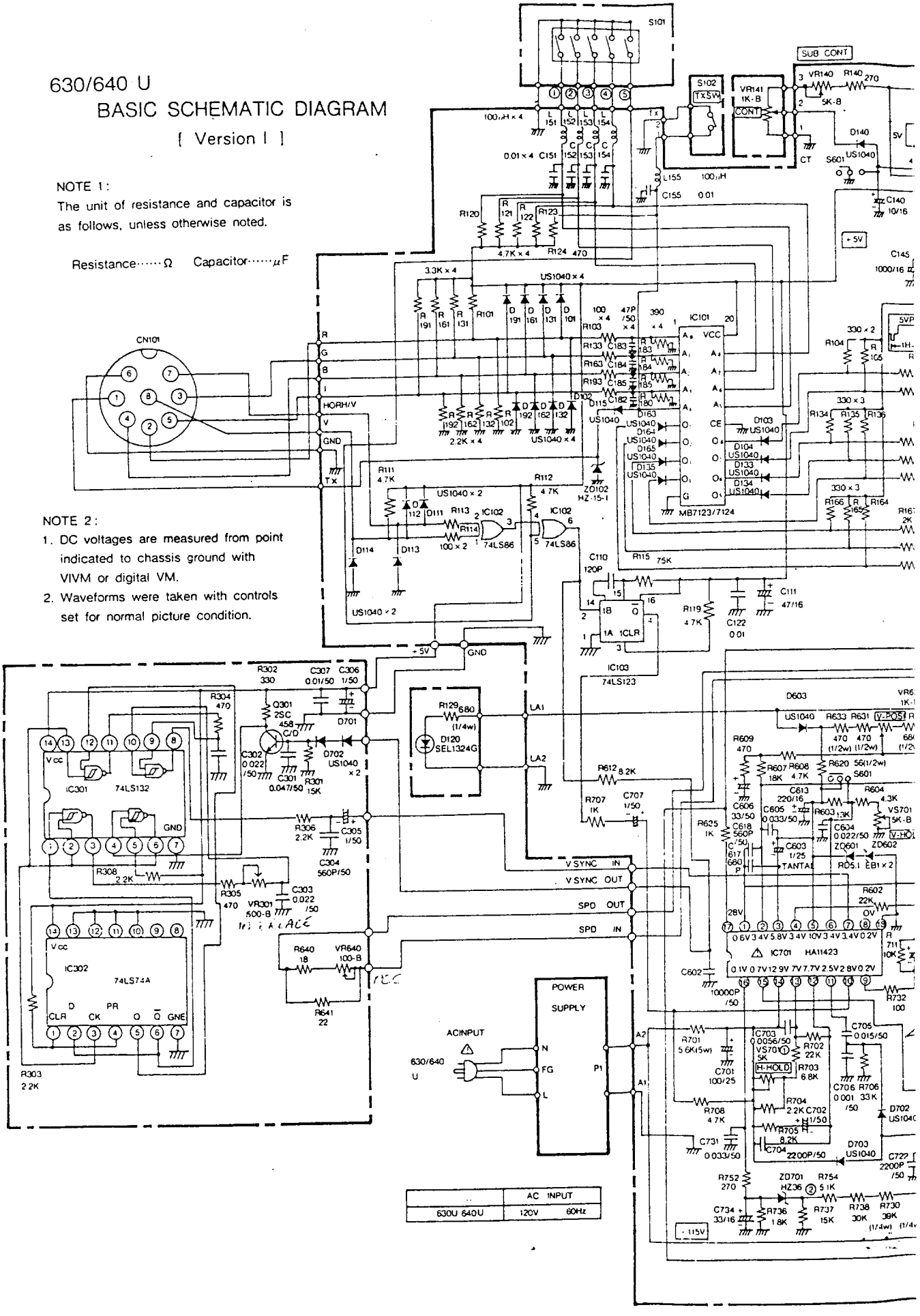
REGRET THIS PAGE IS AS PER ORIGNAL

630/640 U
BASIC SCHEMATIC DIAGRAM
[Version I]

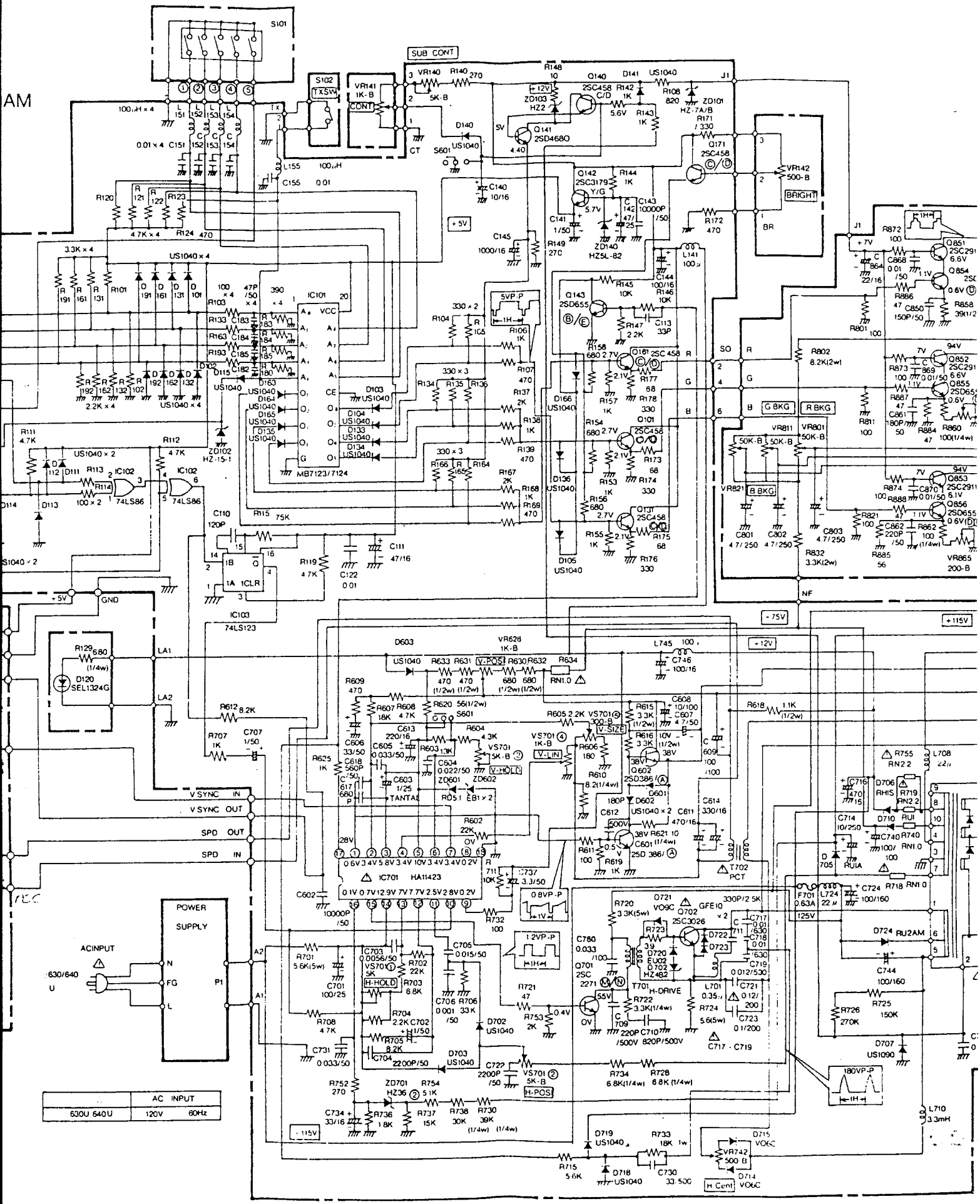
NOTE 1 :
The unit of resistance and capacitor is as follows, unless otherwise noted.

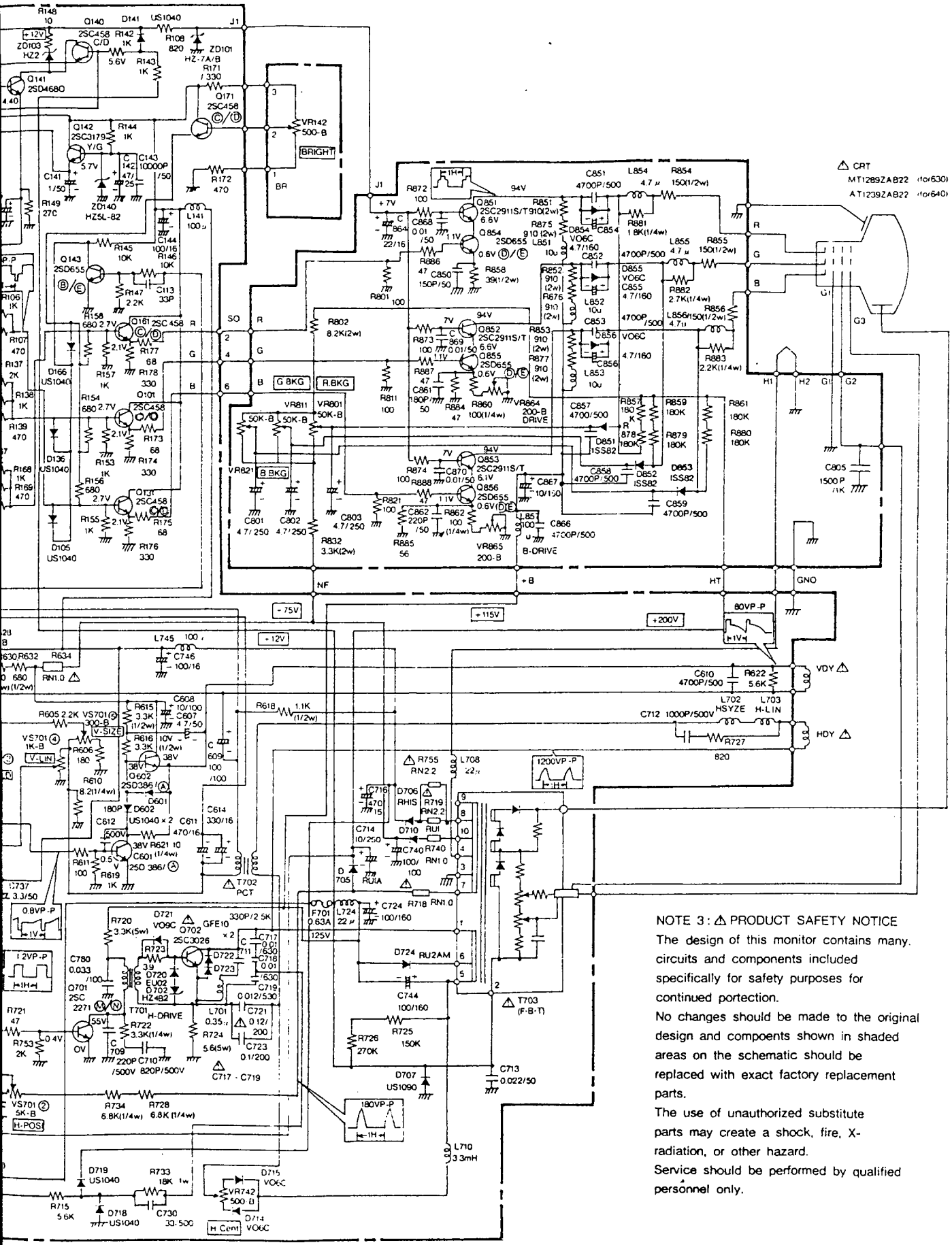
Resistance·····Ω Capacitor·····μF

NOTE 2 :
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.



	AC INPUT	
630U 640U	120V	60Hz


SUB CONT
S101
S102
TX SW
VR141 1K-B CONT
VR140 5K-B
R140 270
R148 10
Q140 2SC458 C/D
D141 US1040
R108 820
ZD101 HZ-7A/B
R171 330
Q171 2SC458 C/D
VR142 500-B
BRIGHT
Q141 2SD468
Q142 2SC3179 Y/G
R144 1K
C143 10000P
R172 470
C140 10/16
C141 1/50
C145 1000/16
R149 270
ZD140 HZ5L-82
+5V
L141 100μ
C144 100/16
R145 10K
Q143 2SD655 B/E
R146 10K
R147 2.2K
C113 33P
R158 680
Q161 2SC458 C/D
R177 68
R178 330
R157 1K
D166 US1040
Q101 2SC458 C/D
R154 680
R173 68
R174 330
R153 1K
D136 US1040
Q131 2SC458 C/D
R156 680
R175 68
R155 1K
R176 330
D105 US1040
IC101 MB7123/7124
IC102 74LS86
IC103 74LS123
ZD102 HZ-15-1
R111 4.7K
R112 4.7K
R114 100×2
C110 120P
R115 75K
R119 4.7K
C122 0.01
C111 47/16
R103 100×4
R133 R163 R193
C183 C184 C185
R183 R184 R185
R180 390×4
R101 3.3K×4
D101 D131 D191
D102 D132 D192
D115 D135 D165
D103 D133 D163
D104 D134 D164
US1040×4
R191 R161 R131
R192 R162 R132 R102
2.2K×4
US1040×2
D111 D112 D113 D114
R113
330×2 R104
R105
5VP-P 1H
R106 1K
R107 470
330×3 R134 R135 R136
R137 2K
R138 1K
R139 470
330×3 R165 R166 R164
R167 2K
R168 1K
R169 470
R801 100
R802 8.2K(2w)
R811 100
R821 100
R831 100
R832 3.3K(2w)
R872 100
R873 100
R874 100
R884 47
R885 56
R886 47
R887 47
C801 C802 C803 4.7/250
C861 180P/50
C862 220P/50
C864 22/16
C868 0.01/50
C869 0.01/50
C870 0.01/50
C850 150P/50
R858 39(1/2)
R860 100(1/4w)
VR801 50K-B
VR811 50K-B
VR821 50K-B
VR865 200-B
Q851 2SC2912 6.6V
Q852 2SC2912 6.6V
Q853 2SC2911 6.1V
Q854 2SC
Q855 2SD655
Q856 2SD655
0.6V
1.1V
7V
94V
SO
R
G
B
G BKG
R BKG
B BKG
NF
-75V
+115V
+12V
+7V
+5V
GND
LA1
LA2
D120 SEL1324G
R129 680 (1/4w)
R612 8.2K
R707 1K
C707 1/50
D603 US1040
VR628 1K-B
V-POS
R633 470 (1/2w)
R631 470 (1/2w)
R630 680 (1/2w)
R632 680 (1/2w)
R634 RN1.0
L745 100μ
C746 100/16
R609 470
R607 18K
R608 4.7K
R620 56(1/2w)
S601
C613 220/16
R603 13K
R604 4.3K
VS701 5K-B
V-HOLD
C606 33/50
C605 0.033/50
C604 0.022/50
C618 560P
C617 680P
C603 1/25 TANTAL
ZD601 RD5.1 EB1×2
ZD602
R625 1K
R605 2.2K
VS701 100-B
V-SIZE
VS701 1K-B
V-LIN
R606 180
R610 8.2(1/4w)
R615 3.3K (1/2w)
R616 3.3K (1/2w)
C608 10/100
C607 4.7/50
Q602 2SD386 (A)
D601
D602
C612 180P
C611 US1040×2
C614 330/16
R611 0.5Ω 25D 386/(A)
R619 1K
R621 10 (1/4w)
C601 470/16
T702 PCT
R618 1.1K (1/2w)
C609 100/100
V SYNC IN
V SYNC OUT
SPD OUT
SPD IN
28V
0.6V 3.4V 5.8V 3.4V 10V 3.4V 3.4V 0.2V
IC701 HA11423
0.1V 0.7V 12.9V 7V 7.7V 2.5V 2.8V 0.2V
R602 22K
C602 10000P/50
R711 10K
C737 3.3/50
0.8VP-P 1V
R732 100
R720 3.3K(5w)
Q721 VO9C
Q702 2SC3026
GFE10 ×2
330P/2.5K
R723 39
D722
D723
C780 0.033/100
Q701 2SC 2271
T701 H-DRIVE
R722 3.3K(1/4w)
R724 5.6(5w)
L701 0.35μ
C721 0.12/200
C723 0.1/200
C717 - C719
C709 220P/500V
C710 820P/500V
R734 6.8K(1/4w)
R728 6.8K(1/4w)
180VP-P 1H
R755 RN2.2
L708 22μ
D706 RH1S
R719 RN2.2
D710 RU1
C716 470/15
C714 10/250
C740 100/
R740 RN1.0
D705 RU1A
F701 0.63A 125V
L724 22μ
C724 100/160
R718 RN1.0
D724 RU2AM
C744 100/160
R725 150K
R726 270K
D707 US1090
L710 3.3mH
R701 5.6K(5w)
C701 100/25
C703 0.0056/50
VS701 5K
H-HOLD
R703 6.8K
R702 22K
C705 0.015/50
C706 0.001
R706 33K/50
R704 2.2K
C702 1/50
R705 8.2K
C704 2200P/50
D702 US1040
D703 US1040
R708 4.7K
C731 0.033/50
R721 47
R753 2K
0.4V
C722 2200P/50
VS701 5K-B
H-POS
R752 270
ZD701 HZ36
R754 5.1K
C734 33/16
R736 1.8K
R737 15K
R738 30K (1/4w)
R730 39K (1/4w)
-115V
D719 US1040
R733 18K 1w
R715 5.6K
D718 US1040
C730 33/50
D715 VO6C
VR742 500-B
D714 VO6C
H Cent
POWER SUPPLY
AC INPUT
630/640 U
N
FG
L
P1
A2
A1
AC INPUT
630U 640U
120V 60Hz

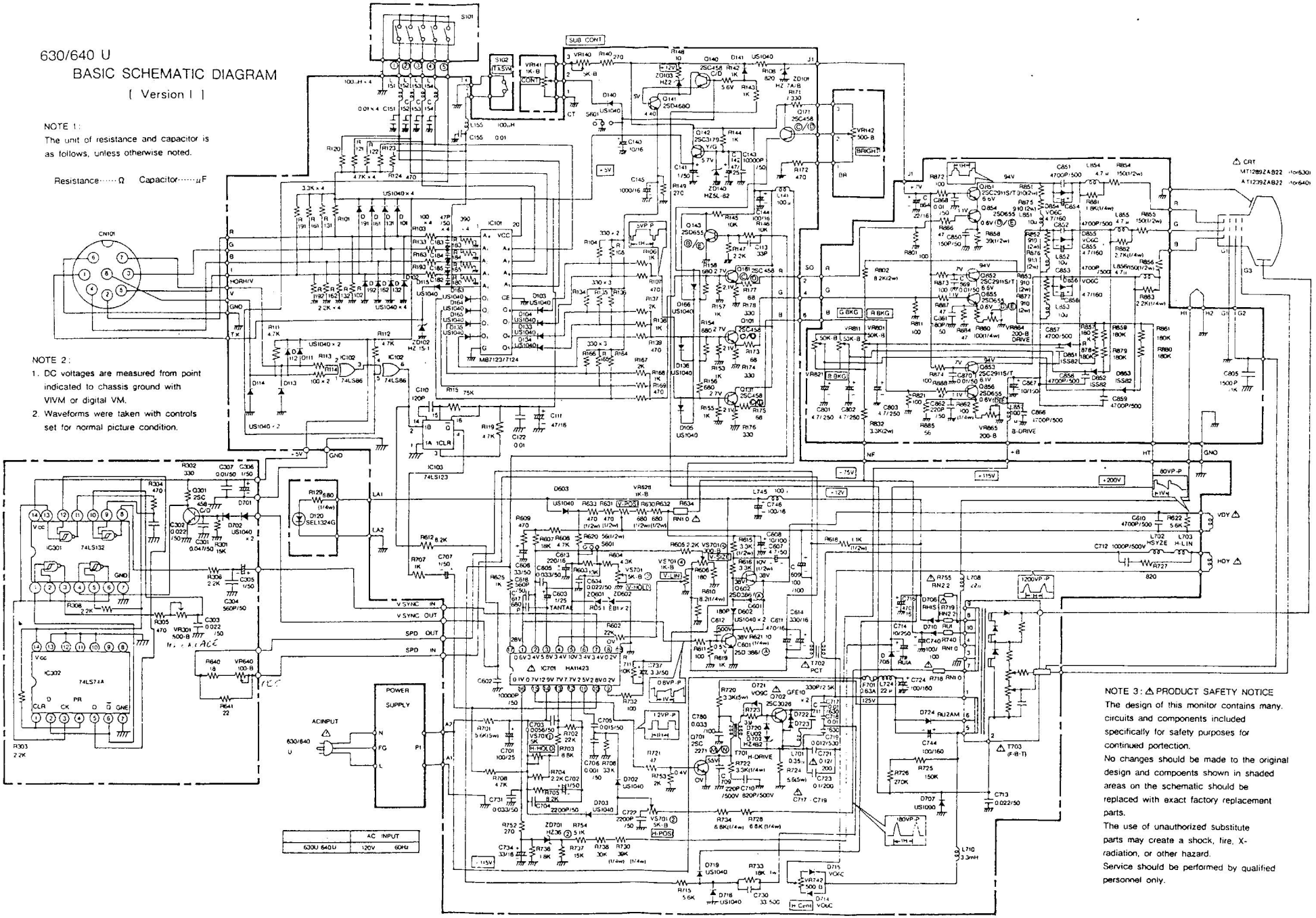

△ CRT
MT1289ZAB22 (for630)
AT1239ZAB22 (for640)
BRIGHT
G BKG
R.BKG
B BKG
B-DRIVE
200-B DRIVE
V-SIZE
V-LIN
H-POS
H-DRIVE
H Cent
PCT
HSYZE
H-LIN
VDY △
HDY △
NF
+B
HT
GND
-75V
+115V
+200V
-12V
+12V
80VP-P
1200VP-P
180VP-P
0.8VP-P
12VP-P
T701
T702
T703
(F·B·T)
L701
L702
L703
L708
L710
L745
R727
820
R725
150K
R726
270K
R734
6.8K(1/4w)
R728
6.8K(1/4w)
R715
5.6K
R733
18K 1w
C730
33·500
C713
0.022/50
C744
100/160
D707
US1090
D724
RU2AM
D719
US1040
D718
US1040
D715
VO6C
D714
VO6C
VR742
500·B
C717 · C719
C780
0.033
C710
220P
/500V
820P/500V
C723
0.1/200
C721
0.12/
200
C719
0.012/530
C716
0.01
/630
C717
0.01
/630
R723
39
R722
3.3K(1/4w)
R724
5.6(5w)
R720
3.3K(5w)
C709
C711
D720
EU02
D702
HZ4B2
D722
D723
Q702
2SC3026
GFE10
×2
330P/2.5K
F701
0.63A
125V
L724
22 μ
C724
100/160
R718
RN1.0
D705
RU1A
C740
R740
RN1.0
C714
10/250
D710
RU1
D706
RH1S
R719
RN2.2
C716
470
/15
R755
RN2.2
C610
4700P/500
R622
5.6K
C712
1000P/500V
R618
1.1K
(1/2w)
C608
10/100
C607
4.7/50
C609
100
/100
C614
330/16
C611
470/16
C612
500V
D601
D602
180P
R610
8.2(1/4w)
R606
180
R615
3.3K
(1/2w)
R616
3.3K
(1/2w)
10V
38V
Q601
2SD386/Ⓐ
Q602
2SD386/Ⓐ
R611
100
R619
1K
R621 10
(1/4w)
C601
250
0.5
V
R605 2.2K
VS701 Ⓐ
300-B
VS701 ④
1K-B
VS701 ②
5K-B
R634
RN1.0
R632
R630
C746
100/16
L745
100
R872
100
C868
0.01
/50
C869
0.01/50
C870
0.01/50
C856
C857
4700/500
C858
4700P/500
C859
4700P/500
C867
10/150
C866
4700P/500
C805
1500P
/1K
C801
4.7/250
C802
4.7/250
C803
4.7/250
R832
3.3K(2w)
R885
56
R862
100
(1/4w)
C862
220P
/50
R821
100
R874
100
R888
47
R873
100
R887
47
R884
47
R860
100(1/4w)
R811
100
R801
100
R802
8.2K(2w)
VR811
50K-B
VR801
50K-B
VR821
VR865
200-B
VR864
200-B
DRIVE
R851
910(2w)
R852
910
(2w)
R853
910
(2w)
R875
910 (2w)
R876
910
(2w)
R877
910
(2w)
R858
39(1/2w)
R854
150(1/2w)
R855
150(1/2w)
R856
150(1/2w)
R857
180
K
R859
180K
R861
180K
R878
180K
R879
180K
R880
180K
R881
1.8K(1/4w)
R882
2.7K(1/4w)
R883
2.2K(1/4w)
L851
10u
L852
10u
L853
10u
L854
4.7 μ
L855
4.7 μ
L856
4.7u
C851
4700P/500
C852
4700P/500
C853
4700P
/500
C854
C855
4.7/160
C856
D851
1SS82
D852
1SS82
D853
1SS82
D855
VO6C
VO6C
VO6C
4.7/160
Q851
2SC2911S/T
6.6V
Q852
2SC2911S/T
6.6V
Q853
2SC2911S/T
6.1V
Q854
2SD655
0.6V Ⓓ/Ⓔ
Q855
2SD655
0.6V
Q856
2SD655
0.6V
Q101
2SC458
Ⓒ/Ⓓ
Q161
2SC458
Ⓒ/Ⓓ
Q171
2SC458
Ⓒ/Ⓓ
Q140
2SC458
C/D
Q141
2SD468O
Q142
2SC3179
Y/G
Q143
2SD655
Ⓑ/Ⓔ
R148
10
R142
1K
5.6V
R143
1K
R108
820
ZD101
HZ·7A/B
R171
/330
ZD103
HZ2
D141
US1040
J1
R172
470
VR142
500-B
C141
1/50
C142
47/
25
C143
10000P
/50
ZD140
HZ5L-82
R149
270
C144
100/16
R145
10K
R146
10K
C113
33P
R147
2.2K
R158
680 2.7V
R177
68
R178
330
R157
1K
D166
US1040
R154
680 2.7V
R173
68
R174
330
R153
1K
D136
US1040
R156
680
2.7V
R175
68
R176
330
R155
1K
D105
US1040
R106
1K
R107
470
R137
2K
R138
1K
R139
470
R168
1K
R169
470
L141
100 μ
2.1V
L
H
G
B
R
SO
2
4
6
1H
94V
7V
1.1V
0.6V
910(2w)
VO6C
4.7/160
4700P/500
4.7/160
4700P
/500
VO6C
4.7/160
180K
180K
180K
180K
180K
180K
1.8K(1/4w)
2.7K(1/4w)
2.2K(1/4w)
150(1/2w)
150(1/2w)
150(1/2w)
4.7 μ
4.7 μ
4.7u
10u
10u
10u
100
100
100

630/640 U
BASIC SCHEMATIC DIAGRAM
[Version I]

NOTE 1:
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance·····Ω Capacitor·····μF

NOTE 2:
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.



	AC INPUT
630U 640U	120V 60Hz

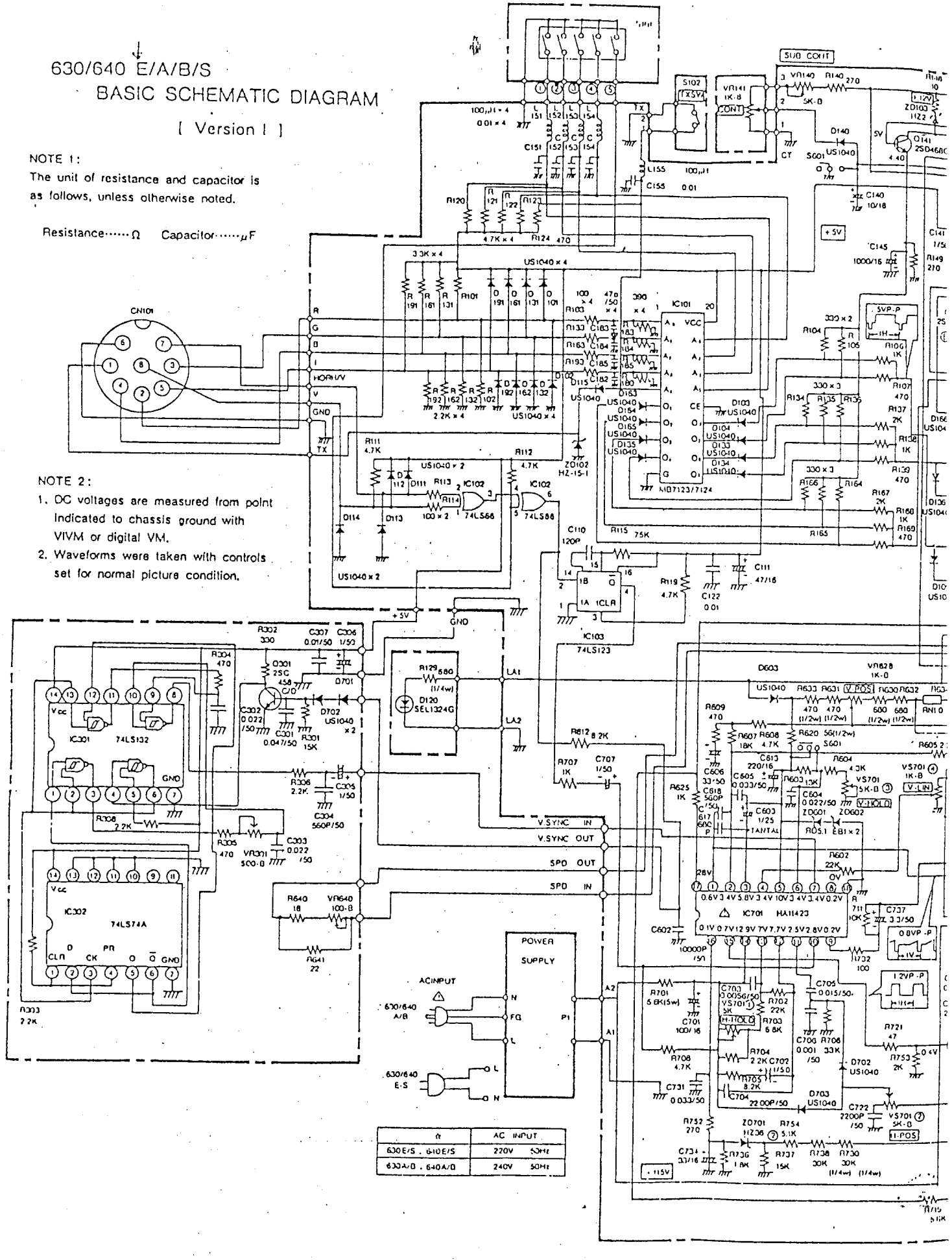
NOTE 3: △ PRODUCT SAFETY NOTICE
The design of this monitor contains many circuits and components included specifically for safety purposes for continued portection.
No changes should be made to the original design and compoents shown in shaded areas on the schematic should be replaced with exact factory replacement parts.
The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard.
Service should be performed by qualified personnel only.

630/640 E/A/B/S
BASIC SCHEMATIC DIAGRAM
[Version I]

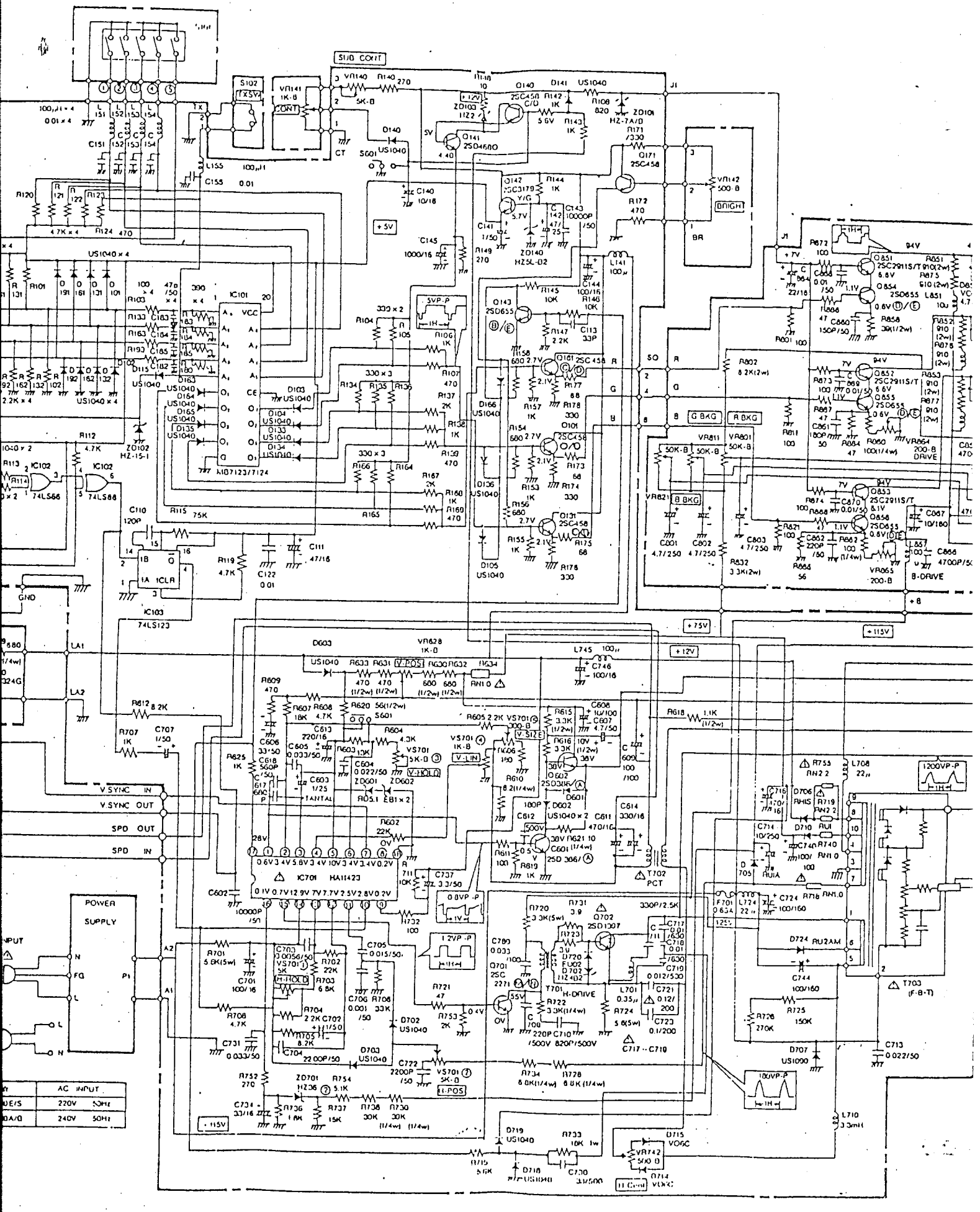
NOTE 1:
The unit of resistance and capacitor is as follows, unless otherwise noted.

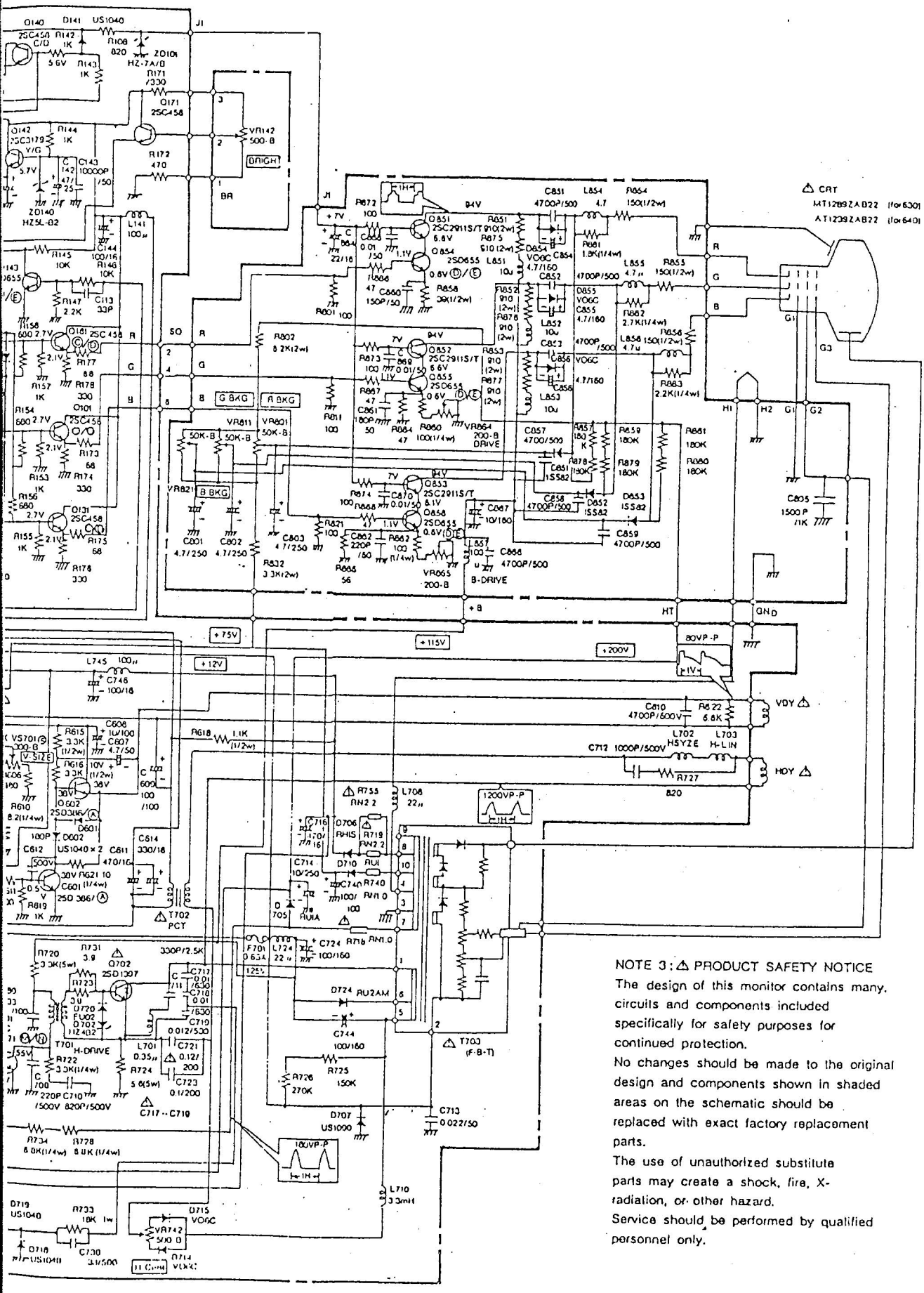
Resistance·····Ω Capacitor·····μF

NOTE 2:
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.



	AC INPUT	
630E/S . 610E/S	220V	50Hz
630A/B . 640A/B	240V	50Hz


S102
VR141
1K-B
CONT
VR140
5K-B
R140
270
D140
US1040
S601
CT
Q140
2SC458 C/O
Q141
2SC4680
Q142
2SC3178 Y/G
Q143
2SD655 B/E
Q171
2SC458
VR142
500-B
BRIGHT
+5V
+12V
+7V
+75V
+115V
GND
IC101
M37123/7124
IC102
74LS86
IC103
74LS123
ZD102
HZ-15-1
ZD140
HZ5L-02
ZD101
HZ-7A/B
ZD103
11Z2
ZD601
RD5.1 EB1 × 2
Q601
2SD 366/A
Q602
2SD1047
Q701
2SC 2271
Q702
2SD1307
T701
H-DRIVE
T702
PCT
T703
(F·B·T)
IC701
HA11423
V.SYNC IN
V.SYNC OUT
SPD OUT
SPD IN
POWER SUPPLY
AC INPUT
220V 50Hz
240V 50Hz
VR811
VR801
VR821
VR831
50K-B
G BKG
R BKG
B BKG
VR864
200-B
DRIVE
B-DRIVE
VR865
200-B
VR742
5K0 B
VR701
5K-B
V-POS
V-SIZE
V-LIN
V-HOLD
H-HOLD
H-POS
VCOC
100VP-P
120VP-P
200VP-P
0.8VP-P
1VP-P
1.2VP-P



NOTE 3 : ⚠ PRODUCT SAFETY NOTICE

The design of this monitor contains many circuits and components included specifically for safety purposes for continued protection.

No changes should be made to the original design and components shown in shaded areas on the schematic should be replaced with exact factory replacement parts.

The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard.

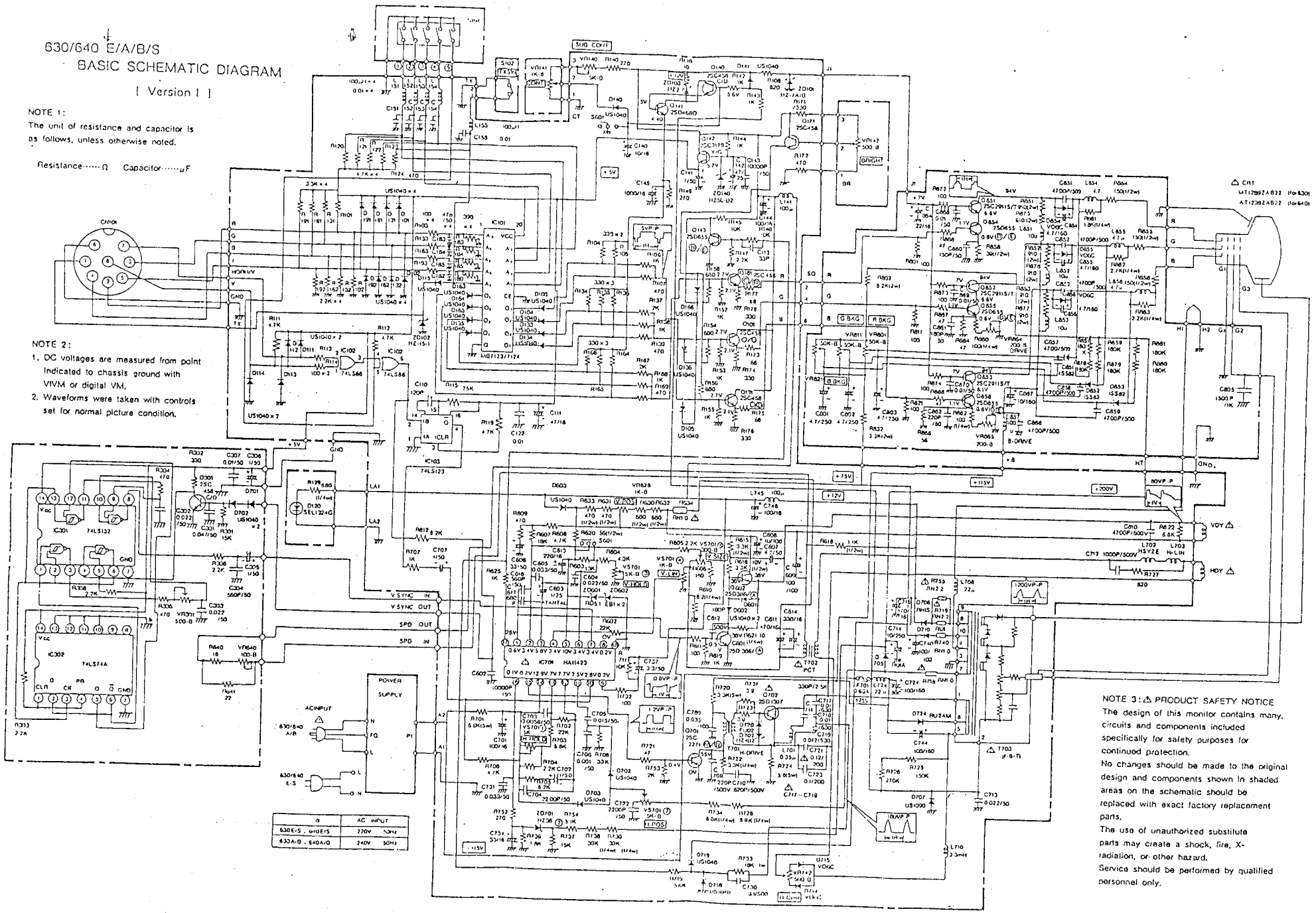
Service should be performed by qualified personnel only.

630/640 E/A/B/S
BASIC SCHEMATIC DIAGRAM
[Version I]

NOTE 1:
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance·····Ω Capacitor·····μF

NOTE 2:
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.



Ω	AC INPUT
630E/S , 640E/S	220V 50Hz
630A/B , 640A/B	240V 50Hz

NOTE 3: △ PRODUCT SAFETY NOTICE
The design of this monitor contains many circuits and components included specifically for safety purposes for continued protection.
No changes should be made to the original design and components shown in shaded areas on the schematic should be replaced with exact factory replacement parts.
The use of unauthorized substitute parts may create a shock, fire, X-radiation, or other hazard.
Service should be performed by qualified personnel only.

630/640 U
BASIC SCHEMATIC DIAGRAM

[Version II]

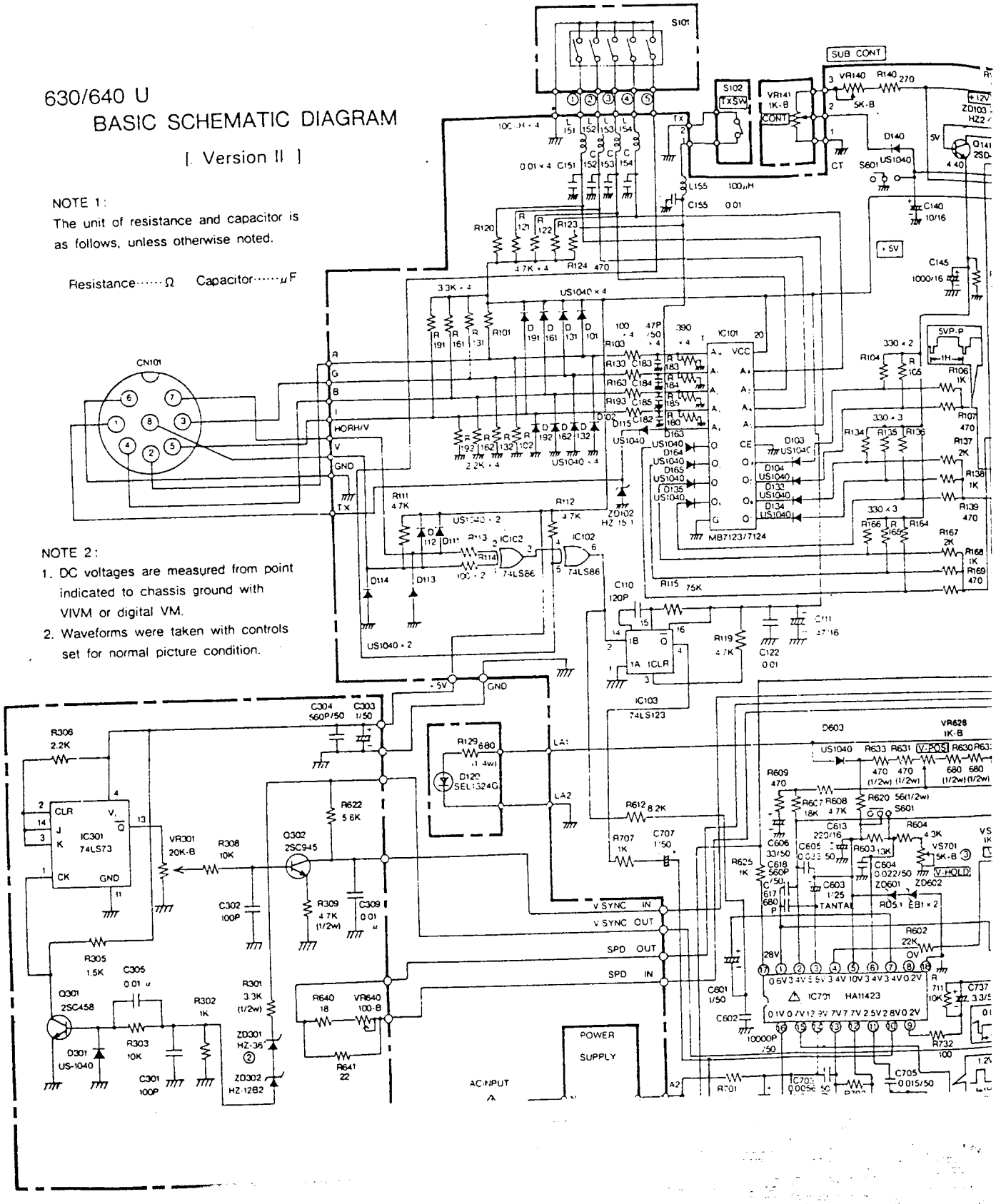
NOTE 1 :

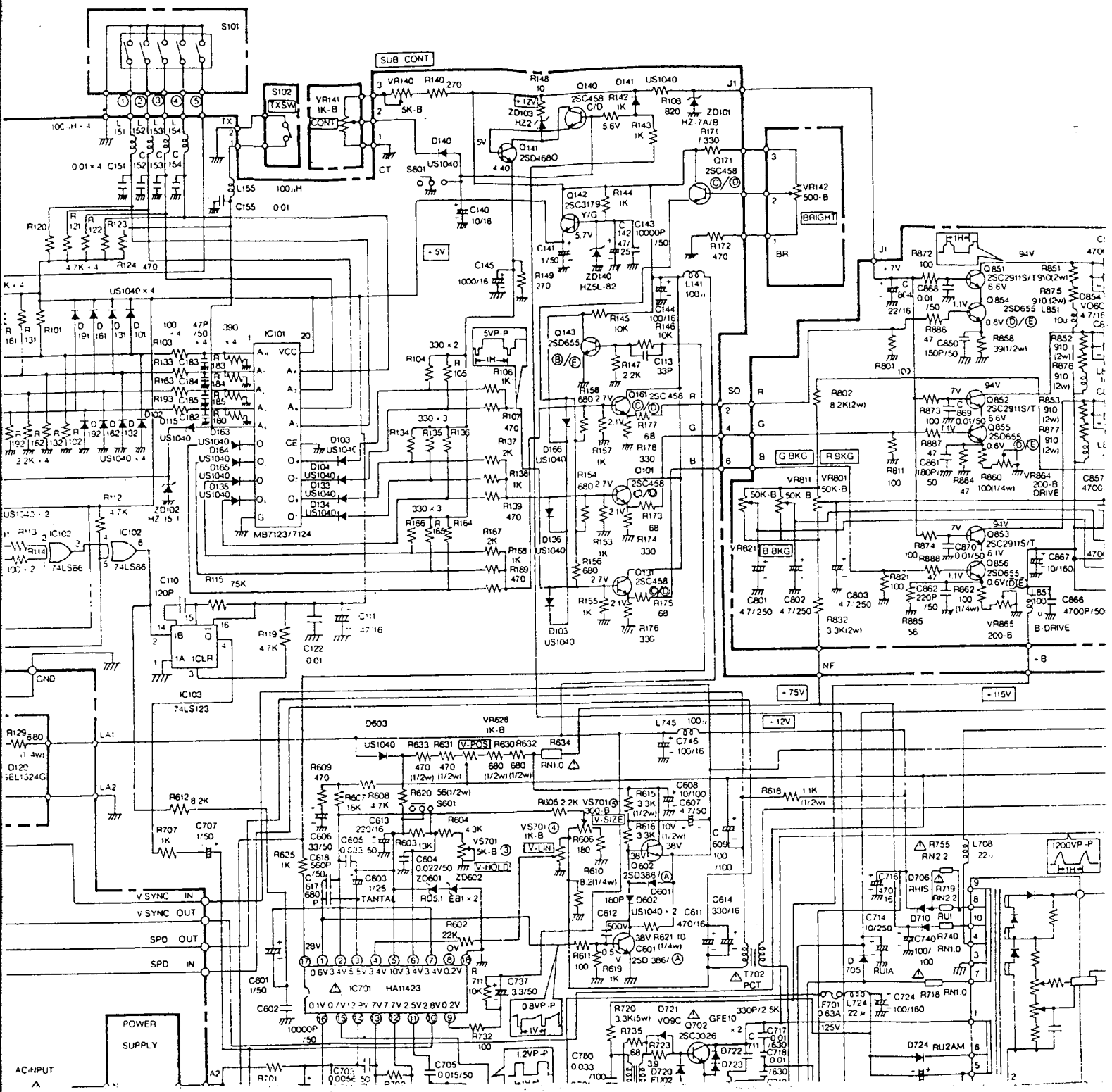
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance·····Ω Capacitor·····μF

NOTE 2 :

1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.




S101
S102
TXSW
VR141
1K-B
CONT
SUB CONT
VR140
5K-B
CT
S601
D140
US1040
R140
270
R148
10
Q140
2SC458
C/D
D141
US1040
R142
1K
R108
820
ZD101
HZ-7A/B
R143
1K
+12V
ZD103
HZ2
5V
Q141
2SD468O
4.40
R171
330
Q171
2SC458
C/D
VR142
500-B
BRIGHT
BR
J1
L155
100μH
C155
0.01
C140
10/16
+5V
C145
1000/16
R149
270
C141
1/50
Q142
2SC3179
Y/G
5.7V
ZD140
HZ5L-82
C142
47/25
C143
10000P/50
R172
470
R120
R123
4.7K×4
R124
470
US1040×4
IC101
MB7123/7124
R103
R133
R163
R193
C183
C184
C185
C182
D102
D115
D163
D164
D165
D135
D104
D133
D134
US1040
R112
4.7K
ZD102
HZ 15-1
IC102
74LS86
R113
R114
C110
120P
R115
75K
C111
47/16
R119
4.7K
C122
0.01
IC103
74LS123
GND
R129
680
D122
GEL1324G
LA1
LA2
R612
8.2K
R707
1K
C707
1/50
V SYNC IN
V SYNC OUT
SPD OUT
SPD IN
POWER
SUPPLY
AC INPUT
A2
R701
C701
0.005
C705
0.015/50
D603
VR628
1K-B
R633
R631
V-POS
R630
R632
R634
470
470
680
680
RN1.0
L745
100μ
C746
100/16
-12V
R609
470
R607
18K
R608
47K
R620
56(1/2w)
S601
C606
33/50
C618
560P
C617
680P
C613
220/16
C605
0.033
50
R603
13K
R604
4.3K
C604
0.022/50
ZD601
ZD602
VS701
5K-B
V-HOLD
R625
1K
C603
1/25
TANTAL
RD5.1 EB1×2
R602
22K
0V
28V
0.6V 3.4V 5.5V 3.4V 10V 3.4V 3.4V 0.2V
IC701 HA11423
0.1V 0.7V 12.3V 7V 7.7V 2.5V 2.8V 0.2V
C602
10000P/50
C601
1/50
R732
100
R711
10K
C737
3.3/50
0.8VP-P
1VP-P
1.2VP-P
C780
0.033
R605
2.2K
VS701
300-B
V-SIZE
R615
3.3K
(1/2w)
C608
10/100
C607
4.7/50
R618
1.1K
(1/2w)
R606
180
VS701
1K-B
V-LIN
R610
8.2(1/4w)
D602
2SD386/A
D601
180P
C612
500V
D602
US1040×2
C611
470/16
C614
330/16
R611
100
R619
1K
0.5V
C601
25D 386/A
T702
PCT
R720
3.3K(5w)
D721
VO9C
Q702
GFE10
2SC3026
×2
330P/2.5K
R735
R723
68
3.9
D720
F1102
D722
D723
C717
0.01/630
C718
0.01/630
F701
0.63A
125V
L724
22μ
C724
100/160
R718
RN1.0
D724
RU2AM
R755
RN2.2
L708
22μ
1200VP-P
1H
D706
AHIS
R719
RN2.2
D710
RUI
R740
RN1.0
C740
100/100
C716
470/15
C714
10/250
D705
RU1A
C709
100/100
+75V
+115V
+B
NF
SO
R
G
B
G BKG
R BKG
B BKG
VR811
VR801
50K-B
VR621
R811
100
R801
100
R802
8.2K(2w)
R872
100
Q851
2SC2911S/T
6.6V
R851
910(2w)
C868
0.01/50
Q854
2SD655
0.6V
R875
910(2w)
L851
10μ
R886
47
C850
150P/50
R858
39Ω(1/2w)
R852
910(2w)
R876
910(2w)
Q852
2SC2911S/T
6.6V
R853
910(2w)
C869
0.01/50
Q855
2SD655
0.6V
R877
910(2w)
R887
47
C861
180P/50
R884
47
R860
100(1/4w)
VR864
200-B
DRIVE
C857
4700
Q853
2SC2911S/T
6.1V
C870
0.01/50
Q856
2SD655
0.6V
C867
10/160
R874
100
R888
47
R821
100
C862
220P/50
R862
100(1/4w)
L85
100
C866
4700P/50
R885
56
VR865
200-B
B-DRIVE
C801
47/250
C802
47/250
C803
47/250
R832
3.3K(2w)
R158
680
2.7V
Q161
2SC458
R177
68
R178
330
R157
1K
2.1V
D166
US1040
R154
680
2.7V
Q101
2SC458
R173
68
R174
330
R153
1K
2.1V
D136
US1040
R156
680
2.7V
Q131
2SC458
R175
68
R155
1K
2.1V
D103
US1040
R176
330
Q143
2SD655
B/E
R145
10K
R146
10K
R147
2.2K
C113
33P
L141
100μ
C144
100/16
5VP-P
1H
R104
330×2
R105
R106
1K
R107
470
R134
R135
R136
330×3
R137
2K
R138
1K
R139
470
R166
R165
R164
330×3
R167
2K
R168
1K
R169
470
D103
US1040
D104
US1040
D133
US1040
D134
US1040
D165
US1040
D135
US1040
D164
US1040
D163
US1040
D115
US1040
D102
US1040×4
R103
R133
R163
R193
C183
C184
C185
C182
R101
R131
R161
R191
R192
R162
R132
R102
2.2K×4
100
47P/50
×4
390
×4
IC101
MB7123/7124
A1
A2
A3
A4
VCC
CE
O1
O2
O3
O4
G
O5
20
1
SVP-P
1H
R104
330×2
R105
R106
1K
R107
470
R134
R135
R136
330×3
R137
2K
R138
1K
R139
470
R166
R165
R164
330×3
R167
2K
R168
1K
R169
470
D103
US1040
D104
US1040
D133
US1040
D134
US1040
D165
US1040
D135
US1040
D164
US1040
D163
US1040
D115
US1040
D102
US1040×4
R103
R133
R163
R193
C183
C184
C185
C182
R101
R131
R161
R191
R192
R162
R132
R102
2.2K×4
100
47P/50
×4
390
×4
IC101
MB7123/7124
A1
A2
A3
A4
VCC
CE
O1
O2
O3
O4
G
O5
20
1

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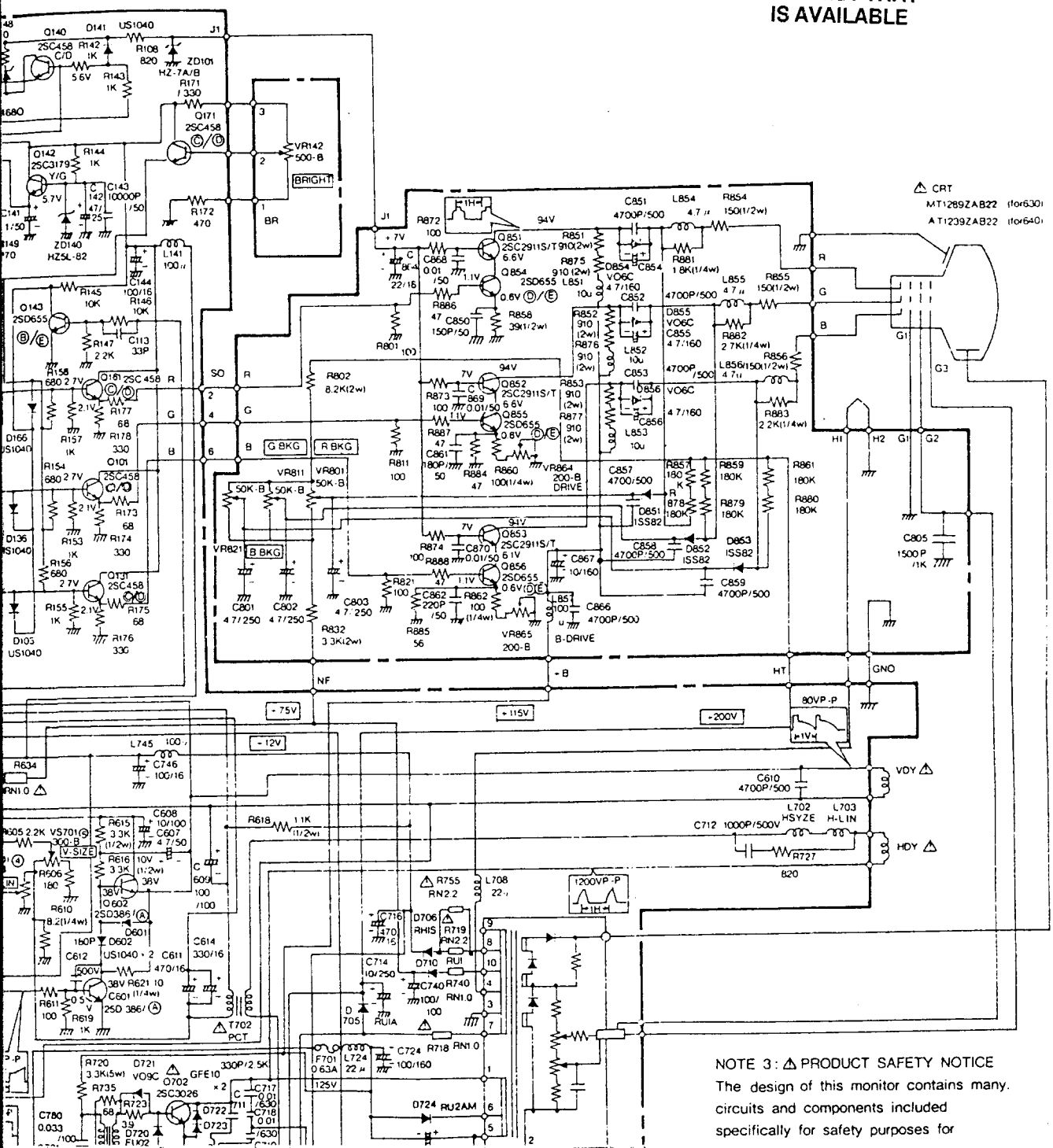
IS AVAILABLE



NOTE 3: ⚠ PRODUCT SAFETY NOTICE
The design of this monitor contains many circuits and components included specifically for safety purposes for

made to the original
components shown in shaded
should be
tory replacement

ized substitute
ock, fire, X-
d.
rmed by qualified

THE QUALITY OF THIS PAGE IS THE BEST THAT IS AVAILABLE

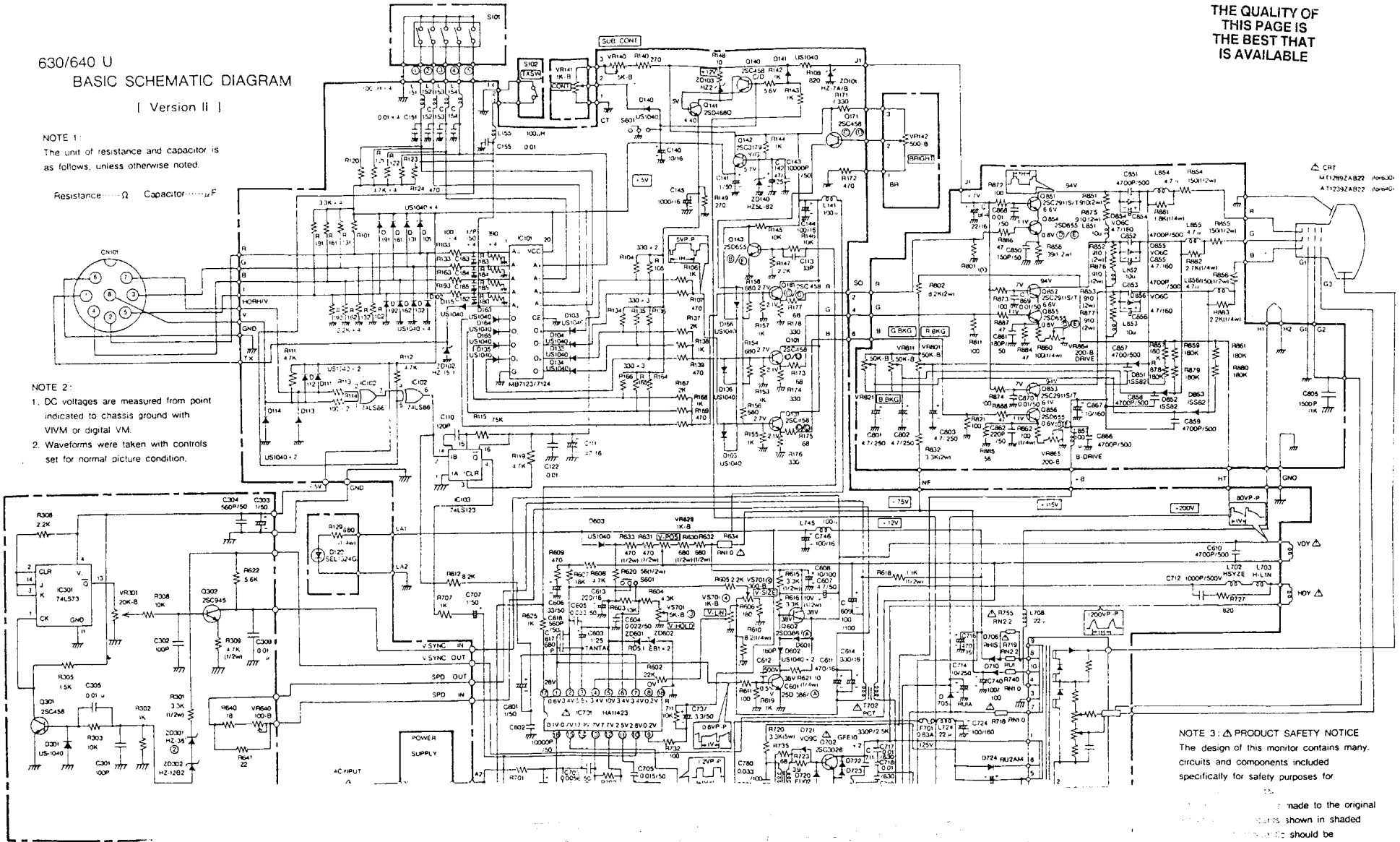
630/640 U
BASIC SCHEMATIC DIAGRAM

[Version II]

NOTE 1 :
The unit of resistance and capacitor is as follows, unless otherwise noted.

Resistance ····· Ω Capacitor ····· μF

NOTE 2 :
1. DC voltages are measured from point indicated to chassis ground with VIVM or digital VM.
2. Waveforms were taken with controls set for normal picture condition.



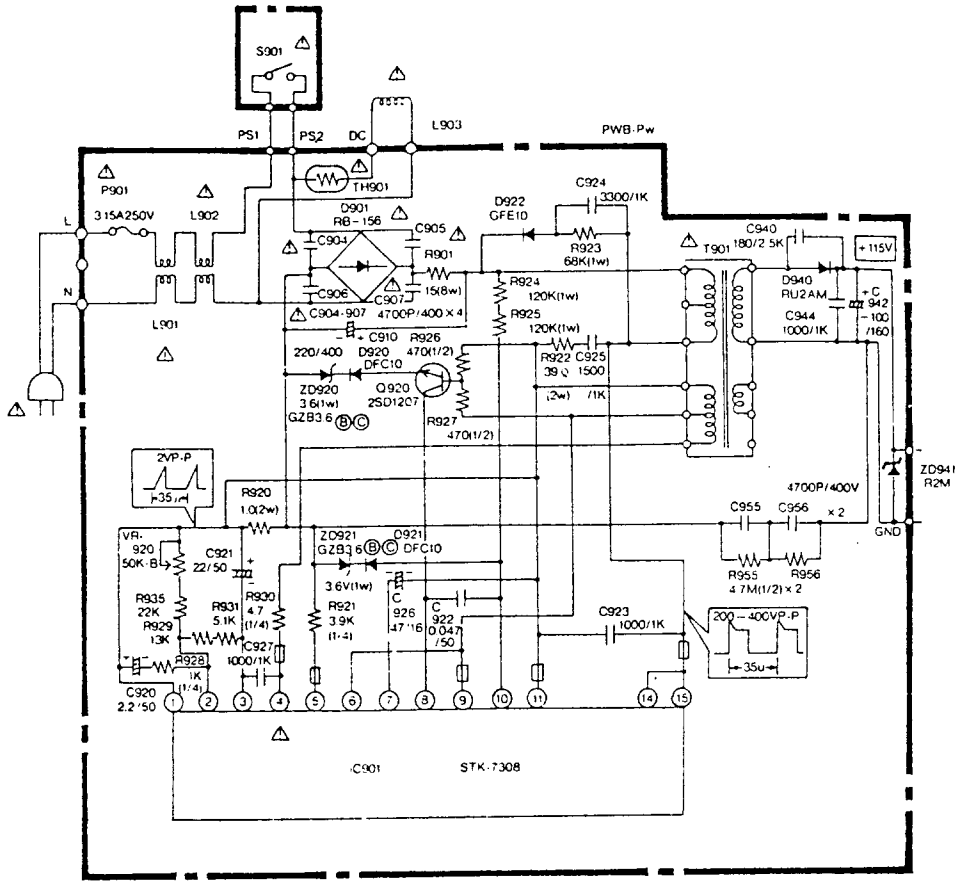
NOTE 3 : △ PRODUCT SAFETY NOTICE
The design of this monitor contains many circuits and components included specifically for safety purposes for

made to the original
shown in shaded
should be
tory replacement

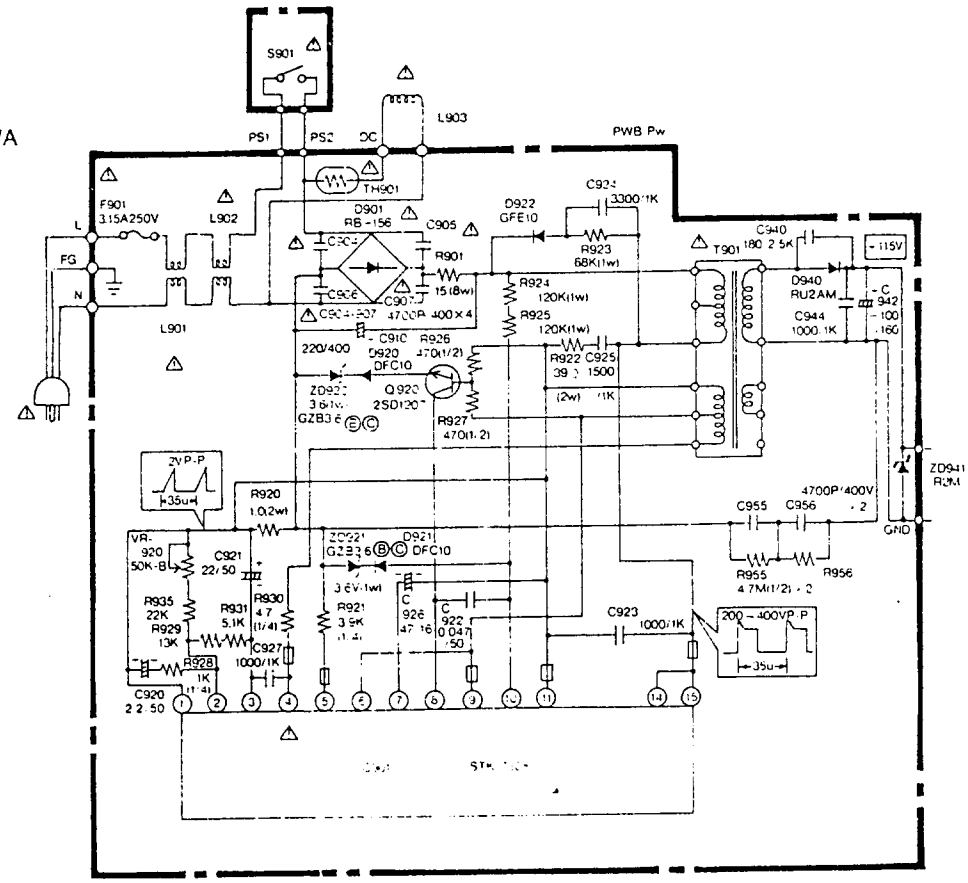
ed substitute
ck, fire, X-
d.
rmed by qualified

POWER SUPPLY SCHEMATIC DIAGRAM

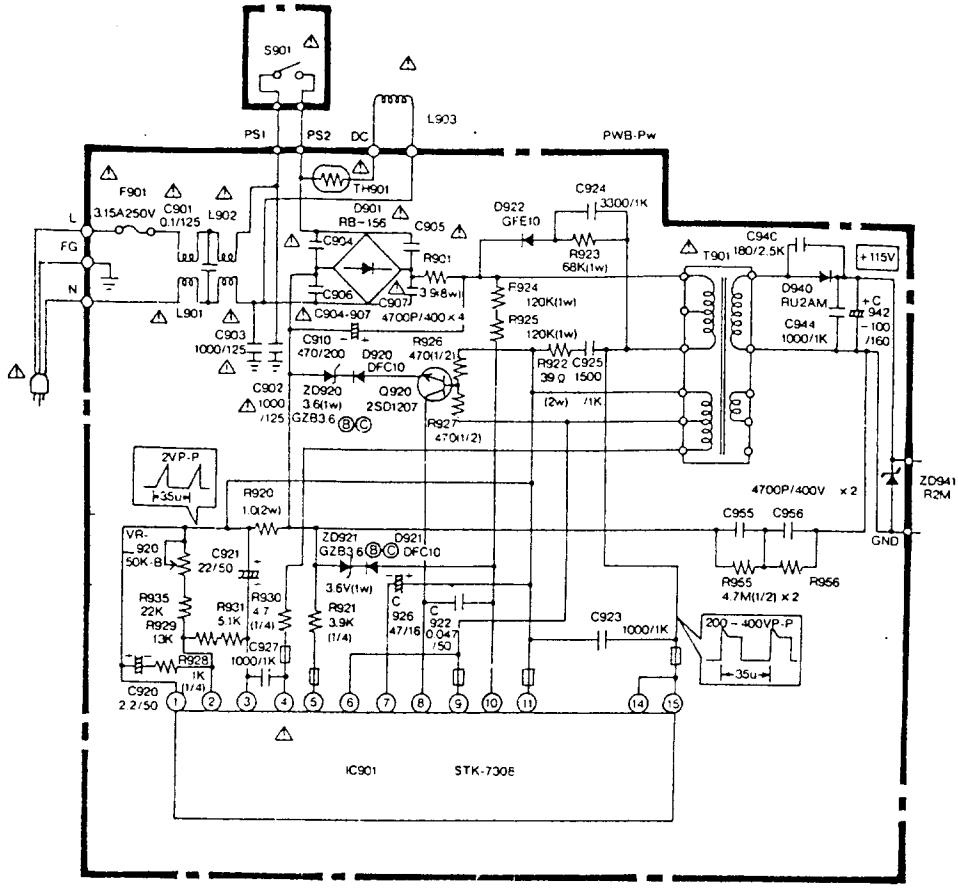
(1) 630E/S,640E/S
AC INPUT
220V 50Hz



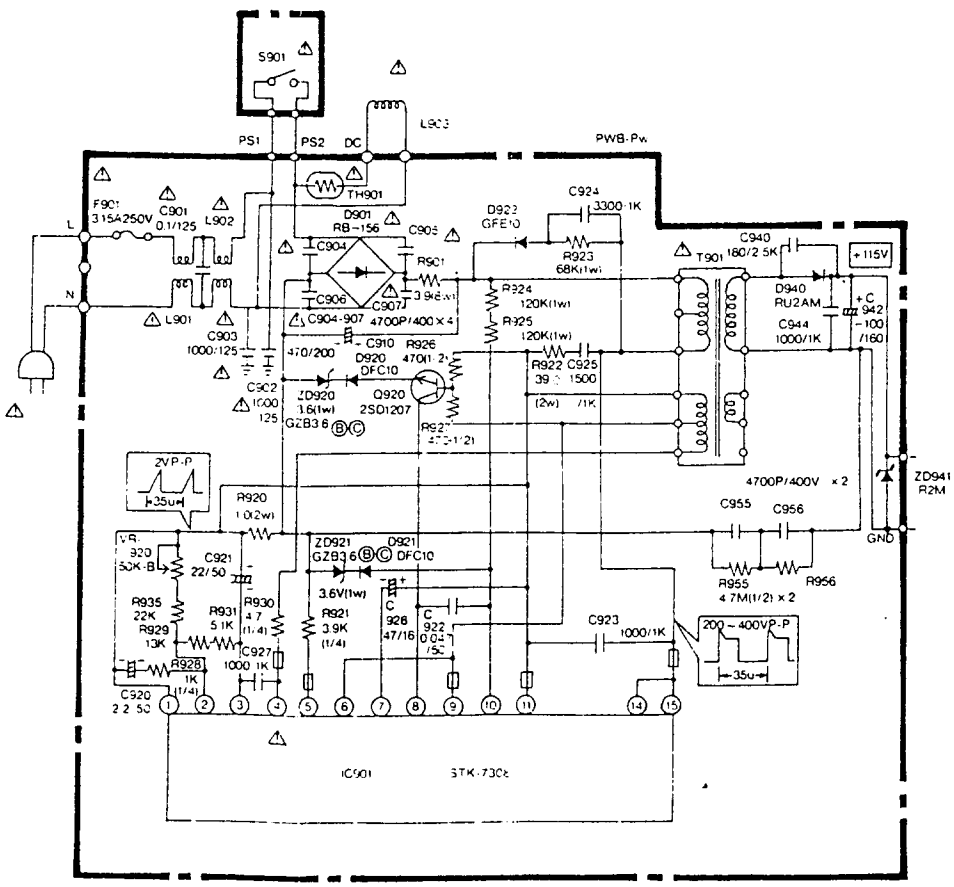
(2) 630B/A,640B/A
AC INPUT
240V 50Hz



(3) 630U,640U
AC INPUT
120V 60Hz

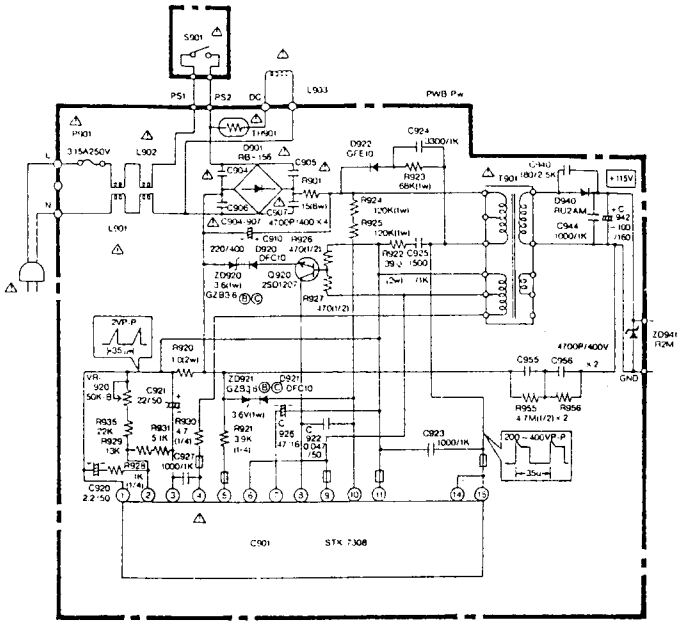


(4) 630J,640J
AC INPUT
100V 50/60Hz

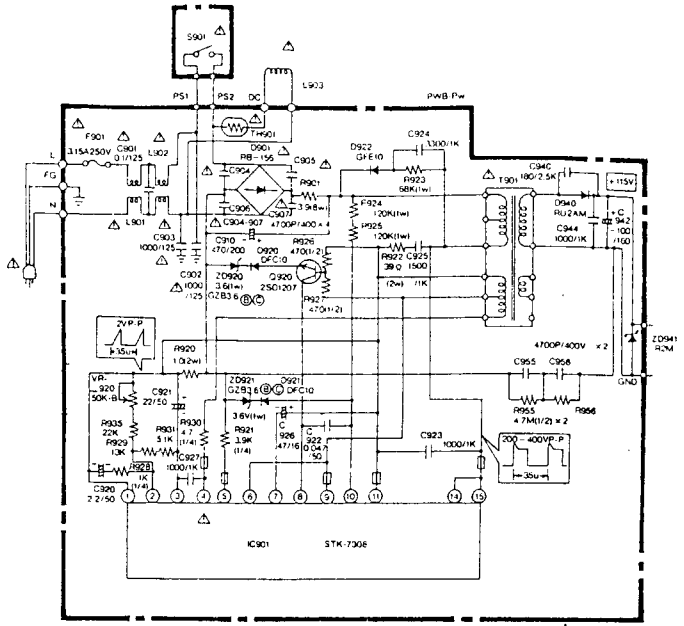


POWER SUPPLY SCHEMATIC DIAGRAM

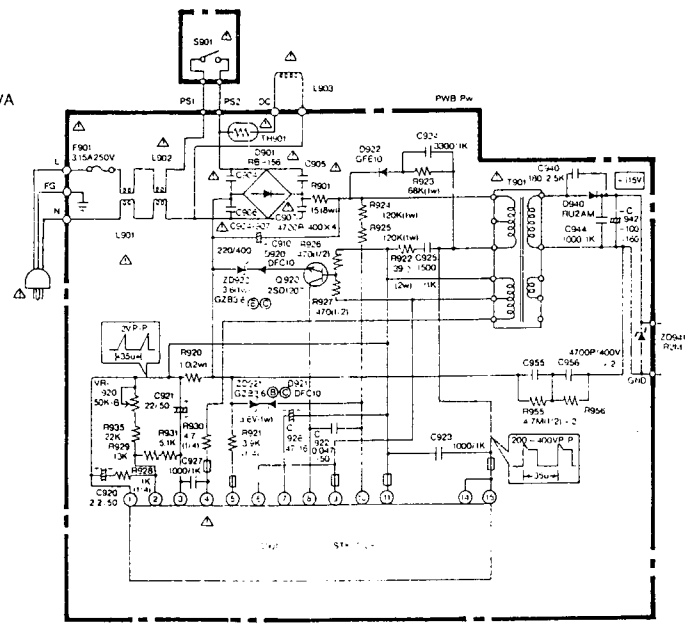
(1) 630E/S,640E/S
AC INPUT
220V 50Hz



(3) 630U,640U
AC INPUT
120V 60Hz



(2) 630B/A,640B/A
AC INPUT
240V 50Hz



(4) 630J,640J
AC INPUT
100V 50/60Hz